Clinical Medicine
and
Surgery

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Dr. William S. Thayer

ON June 23, 1864, in the village of Milton, near Boston, Massachusetts, there was born to James Bradley and Sophia Bradford (Ripley) Thayer, a son who was destined to sit in high places. They called him William Sydney.

Young William was sent to private schools in Milton and Cambridge to gain his elementary education, and then attended and graduated from the Cambridge High School. At the early age of seventeen he entered Harvard University emerging in 1885 with an A.B. degree. The character of his work is attested by the fact that he is a member of Alpha Chapter, Phi Beta Kappa, of Massachusetts.

He at once took up his medical studies at Harvard University where, having been an interne in the Massachusetts General Hospital during his senior year, he received the degree of Doctor of Medicine in 1889, following which event he spent some months in postgraduate study in Berlin and Vienna, which were then the world's centers of medical education. He again journeyed to Europe, for further study in Paris, in 1893.

Upon his return from the Teutonic clinics and lecture halls, he engaged in general practice in Boston, holding at the same time the position of district physician, Boston Dispensary.

Soon after this (in 1890) he became assistant resident physician, Johns Hopkins Hospital, Baltimore, and was made resident physician a few years later. In 1898 he was appointed attending physician and head of the Medical Department of the Dispensary, which position he held until 1906. He was assistant physician, Johns Hopkins Hospital, from 1906 to 1918; physician in chief, 1918 to 1921 and visiting physician, 1921 to 1925.

Dr. Thayer's formal teaching career began in 1896, when he was thirty-two years old, with his appointment as associate professor of medicine, Johns Hopkins University. Then, successively, he was made professor of clinical medicine, in 1900; professor of medicine, in 1918; and emeritus professor in 1921.

His medico-military labors started in 1908, when he accepted a commission as a First Lieutenant in the Medical Reserve Corps. When war was declared he was immediately promoted to a Majority and was ordered into active service in 1918. That same year he received his Colonelcy and was assigned as Director of General Medicine and Chief Consultant in Medicine of the A. E. F. The fact that these duties involved large powers and heavy responsibilities was recognized by his promotion to

be a Brigadier General, in 1918. He held this rank until the following year. The Distinguished Service Medal was conferred upon him in recognition of his accomplishments.

Dr. Thayer has been a fairly active contributor to medical literature, some of his earliest papers having dealt with the problems of malaria. His achievements as a constructive writer and teacher were recognized by Washington College, in 1907, when the degree of LL.D. was conferred upon him.

He has been president of the Association of American Physicians, the Interurban Clinical Club and the American Society for Tropical Medicine and is a member of a long list of medical and other learned societies, both here and abroad, including the National Research Council; the American Philosophical Society; the Therapeutical Society, Moscow; the Royal Society of Medicine, London; the Acadamie de Médicin, Paris; Gesellschaft fur Innere Medizin, Germany; and a number of others, as well as being an Officer of the Legion of Honor, of France.

In person Dr. Thayer is slender and of medium height; keen, active and enthusiastic; very cordial and pleasing in his manner. He laughs easily and heartily and his friends find his society highly agreeable. His interest in the problems now before the profession is lively and vital and he brings to the solution of these problems a wide and ripe experience along many lines, gained by his own activities and by association with the leading thinkers of this generation, all over the world.

The election of Dr. Thayer to the presidency of the American Medical Association is a well merited tribute from the Profession in the United States to a man who has fully demonstrated his powers as a leader and thinker and who will exercise a real and constructive influence upon medical policies in this country.

A physician ought not to be an executioner, and a sentence of death on his face is as bad as a warrant of execution signed by the governor.—Dr. Oliver Wendell Holmes.

SLEEP STARVATION

When a person has gone without food for a while and develops a hearty appetite, he usually is rather proud of the fact and boasts of it rather than attempts to hide it.

Why is it that when one—particularly one of the rising generation—has gone too long with too little sleep he seems rather ashamed of the condition of sleepiness which ensues and denies and hides it as long as he (or especially she) can.

Our youngsters, in particular our girls, are starving for sleep, and many of those same girls are underfed as well, in the crazy effort to keep their figures looking like two crackers on a lath.

An interesting index of this situation is the fact that, while the death rate from tuberculosis is steadily *falling* for most groups in our population, it is steadily *rising* for the group of young women from fifteen to thirty-five years old—the very group which is feeling the strongest effects of insufficient food and sleep.

Of course, conditions have changed, vastly, in the last twenty-five years. Most of us had nowhere to go but home and bed after dark, when the twentieth century dawned. Now, there are so many places that the "live ones" feel that they have to visit three or four every night in order to keep "in the swim."

"Boys will be boys; and girls will be tomboys," as the poet said, and even with that fact in mind, plus the further suggestion which is widely heard (among the older people), that adolescents have less sense than they possessed in bygone years, there still are many who are amenable to reason. If you can show them that food, sleep and sunshine are their deposits in the bank of vitality: while activities—physical, emotional or mental—are their withdrawals, and then point out that dancing, golf, tennis and "petting parties" are checking out their funds faster than they are putting them in, *some* of them will be able to perceive physical bankruptcy ahead.

One great difficulty is that, of late, children have had no special bed hour of their own, but have adopted those of their parents, because those parents had not the sense and the strength of purpose to do what was right, or because the "cliff dwellings" where they lived were so small that *no* one could sleep while *anyone* was up and about.

Another point is that, after having become accustomed to short rations of sleep, a young person can go on for weeks or months without noticing any obvious ill effects on his health. The fact that he is fretful and ill-tempered, sulky when crossed, unable to sit quiet for five minutes or to concentrate attention on anything,

miserable when he is not "doing something" —meaning, tearing around with his contemporaries—does not connect itself in his (or her) mind with the unphysiologic life which is being led.

It is a big problem! We physicians must think it out for ourselves first (especially we who are also parents), and then we must disseminate some sane and reasonable information among the other parents. Finally, we must take occasion, in public and in private, to tell the youngsters what is going on—not "preach" to them about sin and hell-fire, but *talk* to them, as man to man, about normal and abnormal impulses and physiology and lowered resistance and cause and effect and other sensible things, and then pray that their own logic will get to work on the material we have provided.

If you dissipate your health early you will be poor in the end. In youth you should lay aside a health reserve for later years.—Dr. H. N. Bundesen.

Self-control is the foundation on which alone freedom can be built.—Annie Besant.

INTRAVENOUS MEDICATION

The introduction of various drugs directly into the circulation is becoming more and more common, but we have a feeling that too few physicians have an adequate understanding of this procedure or make use of it so frequently as they might, with profit to their patients and their prestige.

Our little contemporary, *Fraser's Notes*, is offering a questionnaire on the subject to its readers, and we are so impressed with the importance of the matter that we would like to hear the opinions of a large number of the active and practical physicians who read this journal. To that end, we hope that many of you will answer all or part of the following questions, in order that we may publish something fresh and authoritative:

1.—Do you use intravenous medication?

2.—In what classes of cases? and what remedies?

3.—With what results?

4.—Do you believe that there are advantages in introducing drugs directly into the blood stream?

5.—What are the advantages? Disadvantages, if any?

6.—Do you believe that intravenous medication is now employed too much or too little? Why?

Write up your experiences with this method, good and bad. A brief paragraph or two, for "Clinical Notes," if your experience is limited: A complete article, for a "Leader," if it is extensive.

The more doctors we hear from, the more benefit will be derived by all.

Do not worry about the composition. Of course, we enjoy receiving clean, elegant manuscripts, but if you have *ideas* and lack the time and talent for attention to literary and mechanical details, send your stuff along and we will put it in good shape.

Though everyone inhabits the same world, it is, nevertheless, a *different* world for each, by reason of differences in consciousness—in *point of view*.—Claude Bragdon.

CACTUS GRANDIFLORUS

During and since the War we have heard a great deal about neurocirculatory asthenia and kindred functional or "nervous" cardiac disorders; and the high-tension life of this twentieth century seems to be not only increasing the prevalence of grave metabolic diseases, such as diabetes and nephritis, but upsetting our hearts as well. The discussion, at this time, of a *heart regulator* seems apropos.

Cactus grandiflorus or "night-blooming cereus" is a native of tropical America and is very popular in our greenhouses where its huge, exquisite and delightfully fragrant blossoms, opening after sunset and dead in the morning, never fail to excite interest.

Medical preparations are made from the fresh, young stems of this plant which are said to contain an alkaloid or glucoside known as cactine. The most popular preparations are the purified *concentrations* made from the whole stems, of which *cactoid* is an example.

Physiologic Action.—Cactus or cactoid exerts a rather unusual action, and it is probably this fact which has led to the vigorous and sometimes acrimonious discussion regarding its therapeutic value which has been going on, more or less intermittently, for a number of years. The pharmacologists and laboratory workers, as a rule, declare that the drug is practically inert; while clinicians who have used it widely and thoughtfully laugh at them and continue to use it, because it *produces clinical results.*

The explanation of this conflict of opinion, in which both parties are right,

from their own standpoint, lies in the fact that cactus has no or very slight effect upon the *normal* bodies of men and animals; while in certain types of *perverted* human physiology its action is direct and positive and sometimes almost dramatic. Laboratory experiments are chiefly made upon *normal animals;* clinical experiments upon *sick human beings;* hence the difference of opinion.

Cactus is practically nonpoisonous and noncumulative and therefore has no toxicology to report. It is generally classed as a *heart tonic* and *diuretic,* but this classification is probably erroneous. It is, rather, *a regulator* of cardiac action, and any increase in the urinary output is a result of the improvements in the *circulatory tone* which it produces.

Its action is probably upon the sympathetic nervous system, especially the cardiac plexus and the superior cervical ganglion, and appears to be an *equalizing* action. If the patient is high-strung and irritable, with tachycardia and palpitation, due to *functional* causes, it will quiet the excitement and relieve the distress, thus gaining the reputation of a cardiac sedative. If, on the other hand, the patient is asthenic, with a slow, soft pulse, precordial distress, low blood pressure, anxiety and melancholia, it will increase the circulatory tone very markedly and thus ameliorate the symptoms, seeming to identify itself as a cardiac tonic. It appears, also, to control and regulate disturbed *cerebral circulation. tion.*

It has slight or no effect upon the pulse rate or force, respiration or central nervous system of normal persons, but there is little doubt that its continued use tends to *increase cardiac nutrition.*

Therapeutic Uses.—Cactus or cactoid is the remedy of choice in most *functional heart irregularities* of almost all varieties. Its action in organic heart disease is decidedly doubtful, except, perhaps, in cases of disease of the *aortic valves,* during the period of compensation.

It is, therefore, to be thought of in cases of cardiac palpitation, precordial pain, intermissions or irregularities of rhythm, pseudo-angina, neurocirculatory asthenia, functional tachycardia or bradycardia, atonic dyspepsia, seasickness (some cases), acute or chronic *tobacco poisoning*—especially if cardiac symptoms are present—and, in fact, almost any symptom or group of symptoms of this general class. Patients who complain of vague forms of cardiac distress, "jumping," "choking," etc., are particularly likely to be benefited.

One field of usefulness of cactoid which is too little understood is its employment in the *nervous irregularities* and mental depressions which frequently attend the *climacteric,* in men as well as in women. Here its regulatory effect upon the heart and the *cerebral circulation* result in producing highly gratifying changes in the condition of many patients whose sufferings, while lacking demonstrable anatomic basis, are none the less real and distressing.

Dr. S. Solis Cohen has emphasized the fact that in order to get satisfactory results from cactus one must have a good and *potent preparation* and *use it properly* in the *right class of cases.* The drug is well worth studying on this basis.

The *dosage* varies with the case. Acute cases of excitement or depression should receive 1 mgm. (1/64 grain) of cactoid every 10 or 15 minutes for several hours or until relieved; later 1 to 2 mgm. every 2 or 3 hours or 3 or 4 times a day. Chronic cases, especially those with depressive conditions, may be given 1 or 2 mgm. (1/64 to 1/32 grain), 3 or 4 times a day for *long periods,* without danger and frequently with marked benefit. Fluid preparations are not reliable unless *known* to be *perfectly fresh.*

This drug appears not to be equally effective in all cases, so the practitioner should not become discouraged if he has a failure or two and go over to those who condemn it entirely. Any honest and open-minded clinician who will give cactus in a *series* of appropriate cases and *check the results carefully,* will be so convinced of its value that he will include it in his permanent armamentarium.

The medical man who has ceased to read has ceased to keep step with his profession.

HOW INTELLIGENT ARE PARENTS?

Parenthood is a profession—the most important profession in the world—and, yet, while doctors, lawyers, dentists, nurses, and even mechanics are required to demonstrate their ability before they are entrusted with their professional duties, anyone who chooses to do so and is potent and fertile can enter upon the duties of parenthood without any preparation whatever and no one will say him nay.

Since the war we have heard a good deal about intelligence tests and the classification of persons into various groups, as to mental adequacy, by their means. The general utility and value of these tests is somewhat problematical, but they are, no doubt, of value in certain conditions.

A modification of the technic of the intelligence test is being more and more widely used, especially in the Army, as a means of determining the extent and accuracy of a person's knowledge along some particular line in the least possible time.

This method may be called preferential selection. It consists in giving the examinee a sheet on which are a number of questions, each followed by several numbered answers, one of which is correct. He is then expected, within a set period of time, to go through the list and select and mark *one* answer under each question. He is graded upon the number of correct selections which he makes. This system is coming into high favor with many thoughtful teachers.

It seems to us that the value of a test or examination of this sort, designed to determine how well qualified a person is for the duties of parenthood, is beyond question. If an acceptable one could be devised it might be a good idea to require candidates for a marriage license to attain a certain grade in such a test.

A beginning along this line has been made by Dr. Bess V. Cunningham, Teachers College, Columbia University, and appeared recently in *Children, A Magazine for Parents*. It consists of 33 questions, each followed by several alternative answers, dealing with matters which all parents may reasonably be expected to know. The person taking the test is supposed to make his selections within a period of 15 minutes, and for each correct answer he is scored three. If he answers all correctly within the time limit his score is 99—no one is a *perfect* parent!

We took the test and made a score of 90, and we believe that every physician could profitably try it and study the test to see how it could be improved. It is something which is worthy of our time and thought.

It might, moreover, be a worthwhile idea to popularize such a test among those of one's patients who are prospective parents and then assist them by filling in the gaps in their knowledge or judgment which are revealed by their answers to the questions. In order to make this easy, the publishers offer to send any number of the test blanks to any inquirer, without charge. Their address is 353 Fourth Ave., New York City.

If any of our readers are sufficiently interested to carry out the test on a number of people, we should be delighted to publish a summary of the results obtained.

A son should be treated as a prince for five years; as a servant for ten years; and, from his sixteenth year on, as a friend.—Sanskrit Proverb.

AVIATION MEDICINE

Transatlantic flight is no longer a vague, chimerical dream but a glorious reality! Lindbergh and Chamberlain have conquered the air and all but annihilated space! Deeds have been done which stagger the imagination and thrill us with a romantic interest seldom aroused during historic times.

If these epoch-making flights were merely an heroic gesture, rarely or never to be repeated, it would be wonderful enough, but the considerations which lend them their unique and vital position in our thoughts are, that if one man, driving one type of modern airplane, can fly from New York to Paris or Berlin in two days and a night, there is no sound reason why other men, flying other types of machines, cannot duplicate or better the performance: No reason why this generation may not live to see passengers and mail transported regularly, on a commercial scale, across the Atlantic and probably across the Pacific also.

We cannot refrain from repeating the historic and prophetic words of Benjamin Franklin, uttered a century and a half ago: "Of all inventions, the alphabet and printing press alone excepted, those which abridge distance have done most for the progress and civilization of mankind." In Franklin's day Europe was separated from America by thirty-six or more perilous and uncomfortable days at sea: Now the two worlds are less than thirty-six *hours* apart —the Atlantic Ocean has been reduced to the dimensions of a large duck-pond.

The social and humanitarian possibilities involved in the practical abolishment of distance are so immense that we are overcome, as we are by the astronomer's talk of scores and hundreds of light-years or the modern physicist's discussions of the infinite smallness and incalculable power of the electrons.

There are, however, certain immediately

practical thoughts which arise when one considers the imminence of the wide and general use of airplanes as a method of every-day transportation, and in particular there are points which should be given prompt and thoughtful attention by physicians. Among these are the possibilities in connection with the quick and easy removal of sick and wounded persons to fully equipped hospitals at considerable distances, and the proportional enlargement of the fields of activity of individual doctors who can, literally, "fly to the bedsides of their patients."

But a more pressing and personal problem is presented by the great impetus which has been given to aviation in general by Lindbergh's feat. It is reported that the number of applicants for instruction in flying has increased five fold since the American hero landed in Paris.

In order to be a safe and successful flier, a man (or woman) must possess certain phyical, mental and temperamental qualifications which are by no means the common heritage of all of us. This has been fully recognized in the air services of the Army and Navy, and would-be flyers are now subjected to a much more elaborate and searching physical examination than is required for entrance into the other branches of these services. These examinations require a high degree of special technical skill on the part of the doctors who perform them.

The man who is flying regularly requires, also, a special type of supervision as to his diet, exercise, rest and other vital activities, if he is to continue that work with safety to himself and to those whose lives depend upon his judgment, dexterity and endurance—the passengers who will soon be traveling the air lanes as a daily matter of course.

The Army has realized this need for a special service and has established the grade of Flight Surgeon. Applicants for this designation must be young men, preferably unmarried, of clean life and filled with enthusiasm for the work. They must, moreover, themselves qualify as aviators. Their work is to examine those who wish to become fliers and determine their fitness for such duty, and then to watch over, instruct, train and frequently reexamine the bird-men so as to make sure that no one takes up a plane when, for any reason, he is in unfit physical or mental condition to do so with safety to all concerned.

If the Army, whose members are the physically selected cream of our young adult manhood, requires such careful oversight of its aviators, how much more discrimination will be needed to make sure of the fitness of the thousands of young and old persons, of both sexes, who will soon be yearning to dash off along the sky paths of the air! Why, thoughtful persons are, today, realizing that there are many who are physically (by reason of poor vision or hearing, nervous diseases, etc.) or mentally unfit to be driving automobiles. To be an air pilot requires far greater skill and ability.

Here, then, dawns the vision of a new specialty in our profession—*Aviation Medicine.* If the airplane will still further reduce the need for country doctors of the kind that our fathers knew (as some believe it will), it will also open a line of activity of which our grandfathers never even dreamed and on which even our fathers hesitate to ponder.

Every prospective flier will require an exhaustive examination prior to beginning to receive instruction in that line and, if found qualified, will need to be frequently reexamined and constantly supervised and instructed in the hygiene and physiology of the life he is adopting. This service cannot be adequately rendered by a physician who lacks special training, even though he may be a wise and successful clinician.

The younger men in the profession and those who are about to enter it should be giving this matter serious thought in mapping out their life's work. *Someone* will have to render such services as we have suggested, if aviation is to make the sound and enduring progress which we hope and foresee for it; and if it tries to go forward with the rush which some observers predict, there is danger that, unless we are alert to the signs of the times, it may be held back by lack of preparedness in that group of men who have always taken pride in being in the van of all movements toward the amelioration and advancement of mankind.

Thought makes everything fit for use.—Emerson.

"GETTING GOOD RESULTS"

It is not at all uncommon, in looking over reports sent in by physicians in connection with some new drug or procedure, to find

the statement, "I am using so-and-so and getting good results."

What, in heaven's name, does a report like that mean or amount to? Precisely nothing! Results obtained, good or bad, depend upon the nature of the case and their "goodness" or "badness" are matters of individual opinion in the mind of the attending physician. The medical world is eager to know exactly *what* drug or other method of treatment you used; *how* you used it—dosage, technic, etc., *in detail;* and the *precise results* which followed its use—changes in temperature, pulse rate, blood pressure, leucocyte count, etc.

We may do certain things for a patient and *think* that they have had certain effects upon him, but unless we accurately and repeatedly *measure* such of his functions and tissue changes as are measurable we can never *know* what results we have achieved, and without knowledge there is no science to medical practice.

The human memory is frail and fallible and prone to lapses at critical moments, so that, even though we know a thing today, we may forget it by tomorrow or next week unless we *make a record of it.* Such records serve two highly practical purposes: They make the results of our past studies and observations available to *us* at any time, for our future guidance; and they place us in a position to convey valuable information to the other members of the profession, thereby increasing their usefulness and our own prestige.

We have complaints, now and then, that the laboratory is overshadowing the sickroom in our medical publications. Who is to blame for such a condition of affairs if not the clinicians of this country? The findings of the laboratory are not more fundamentally scientific than those made at the bedside; but the laboratory worker is trained in—and *uses*—the *scientific method,* diligently *observing* and *recording* his results as he goes along; while we clinicians—equally well trained—neglect to use our faculties and the instruments of precision which are now at our disposal, or, if we do use them, omit to make any logical record of what they tell us.

As soon as practicing physicians generally wake up to their powers and possibilities and begin to *observe, record* and *report* upon what they are seeing and doing, the laboratory workers will be practically crowded out of all but the journals devoted to their specialties.

Again we urge upon every one of our readers to study and record his cases, adequately and accurately, reporting all rare, exceptional or especially instructive cases as they go along. And when they have a volume of material on any special subject which warrants generalizations, that they write it up for their own benefit and that of others.

The first cost, in time and money, of a workable system for case recording is very small. In the end it will prove to be, not an expense, but the best investment any doctor ever made.

The best memory sometimes fails—a well-chosen library never does.

PROCTOLOGY

Like all things else which have extension in finite space, the gastrointestinal canal has two ends.

The upper or entrance end is considered one of the most respectable or even noble parts of the body. Its contours and coloring are considered beautiful and have been celebrated in song and story from time immemorial.

Just within this orifice are a number of structures which are of the greatest interest to the medical profession—the teeth, tongue, tonsils and adenoids—arranged in a complicated manner which furnishes many opportunities for hidden nidi of infection.

More physicians have, in all probability, devoted their lives to the study of the upper end of the gastrointestinal canal, with the superior respiratory structures which accompany it, than have engaged in the practice of any other medical specialty, and much progress has been made in curing the ills to which these parts are liable.

On the other hand, the lower or exit end of this selfsame tube has, by all civilized peoples, been considered pudendous and disgusting, so that even its name has always been taboo in respectable society. Its contours and coloring are unattractive and its anatomic situation removes it from the field of observation, even by its possessor. The exercise of its functions gives its owner no pleasure, such as that derived from the various uses of the mouth.

Even the most delicate lady has no hesitancy in discussing freely, not only with her physician but also with her friends of both

sexes, the condition of her teeth and tonsils; while even men of experience show a diffidence in expounding their rectal symptoms, even in the privacy of the consulting room. The mention of an oral surgeon arouses a feeling of respect and admiration; while an allusion to a proctologist is likely to be greeted with prurient snickers.

Are there, then, differences in the respectability of different parts of the same human body? If Society—note the capital S—sees such differences, the physician recognizes none. All parts are alike to him in his search for the causes and cure of disease.

The rectum, while lacking the obvious variety of structures found in the mouth, is, none the less, a very complex organ, anatomically and histologically. The blood supply of its upper end connects with the portal system, while that of its lower portion is derived from the general circulation. It is surrounded by delicate and sensitve muscles, whose condition, as to irritation and spasm, exercises profound effect upon the nervous system.

Like the mouth, its actual orifice has a cutaneous covering, while within it is lined with mucous membrane. Its blood supply is as free and as susceptible to deleterious influences as is that of the oral cavity. The bacterial flora of the two structures is similar in many respects, in abundance and variety. The glandular and cryptic structure of the two organs have many points of resemblance and offer quite comparable opportunities for the encystment and retention of infectious material which, in either case, may give rise to serious or dangerous toxemia.

The physician who neglects the rectum when enquiring into the etiology of any chronic disturbance of general health or functioning is doing an injustice to his patient and to himself: To his patient, because every person who is ill is entitled to a *complete* opinion from his medical attendant; to himself, because he thus loses many opportunities for increasing his diagnostic and therapeutic prestige, as well as improving his financial position.

The diseases of the rectum are no more difficult to diagnose and treat than are those of the mouth, nose and throat, and the results from proper and skilful diagnosis and treatment are no less spectacular and satisfying. Rectal diseases cause almost, if not quite, as much acute and chronic distress and incapacity as do those of the entrance to the digestive canal—and they are infinitely less thoroughly studied and discussed and adequately treated.

The field of the "head specialties" is, if anything, overcrowded at the present time; while proctology has far too few skilled representatives. Moreover, the treatment of the simpler rectal diseases is entirely within the powers and facilities of the general practitioner, even in the remoter districts, and the diagnosis and treatment of such conditions would do much to ameliorate many of the various conditions of which certain country doctors are making such bitter complaint.

A questionnaire, some months ago, brought out the fact that only *five* out of a toal of 1423 physicians interviewed were especially interested in proctology. General practice attracted the most attention from 326; minor surgery, of 79; economics, of 161; health conservation of 60; and physical therapy, geriatrics, gynecology, cancer and nervous and mental diseases of enough more to make a total of 765—more than half of the total number.

All of the subjects just mentioned are closely bound up with the study and practice of proctology and all who are interested in them should find a corresponding interest in some phases of the problem of rectal diseases. If any explanation is needed of the space which we are giving to articles in this field, here it is.

Leading Articles

The Moron Problem*

By MEYER SOLOMON, M.D., Chicago
Associate in Neurology, Northwestern University, Medical School.

THE term "Moron" is being used today in three main ways; namely, in its (1) etymological meaning; (2) newspaper meaning; and (3) medical, scientific meaning.

Etymologically, derived from the Greek word "morcs", in its literal sense it means "a foolish one".

In the newspapers in the United States it is now being used to apply to any person with a tendency to commit acts of sex delinquency, especially sexual attacks of the nature of rape and perversion, occasionally ending in the murder of the victim. This would include persons of various mental types—alcoholics, the mentally deranged, epileptics, psychopathics, feebleminded and normal persons who commit such acts.

Its medical, scientific meaning is the one which will be developed in this paper. Various psychological tests, called intelligence tests, especially those known as the Binet-Simon and the Stanford revision of Binet-Simon tests, are employed to grade the development of intelligence. They are based on arbitrary tests for each age, tried on thousands of school children, especially French and English. Each test is graded. The tests are given until the individual fails in all for a given age; credit for all successful tests is given.

Whereas, previously only the idiot (who is an individual who never advances beyond the third year of age, mentally) and the imbecile (who never advances beyond three to seven years of age, mentally) comprised the feebleminded, the term moron was introduced by the Committee on Classification of the Feebleminded appointed by the American Association for the Study of the Feebleminded in 1909, as applicable to those feebleminded or mentally defective persons who never advance beyond eight to twelve years of age, mentally.

*Presented before the Medical Round Table of Chicago, April 12, 1927.

Classification of Feebleminded

For the purpose of classification the intelligence quotient, commonly called the I.Q., is also employed in children. Regarding all persons over 16 years of age as 16 years old, chronologically, the intelligence age, often miscalled the "mental" age, divided by the actual or chronological age and multiplied by 100, gives the I.Q. percentage. For example, and 8-year-old child with an intelligence age of 4, has an I.Q. or intelligence quotient of 4/8x100 or 50; a 6-year-old child with an intelligence age of 6 years, has an I.Q. of 6/6x100 or 100; while an 8-year-old child with an intelligence age of 12, has an I.Q. of 12/8x100 or 150. An I.Q. below 75 according to some and below 70 according to others classifies the individual as mentally defective or feebleminded.

The following classification is adopted by many:

1.—I.Q. of 0 to 25 means the child is an idiot and will not advance beyond 1 to 3 years of age.

2.—I.Q. of 25 to 49 means the child is an imbecile and will not advance beyond 3 to 7 years of age.

3.—I.Q. of 50 to 70 or 75 means the child is a moron and will not advance beyond 8 to 12 years of age. Many regard an I.Q. of 70 to 75 as doubtfully feebleminded.

4.—I.Q. of 90 to 110 means an average child.

5.—I.Q. above 110 means a superior child.

Giving the adult a mental age of 15, the height of mental development and probable final school grade possible for groups with different I.Q. percentages is approximately as follows:

I.Q.	Mental age	Probable final school grade
30	5	Kindergarten
40	6	1st grade
45	7	2nd grade
50	8	2nd or 3rd grade
60	9	3rd or 4th grade
65	10	4th or 5th grade
70	10-11	5th grade
75	12	6th grade

The classification adopted by the American Association for the study of the Feebleminded in 1920 is:

1.—An idiot is a mentally defective person with a mental age of not more than 35 months; or, if a child, with an I.Q. of less than 25.

2.—An imbecile is a mentally defective person with a mental age of from 36 to 83 months; or, if a child, with an I.Q. of 25 to 49.

3.—A moron is a mentally defective person with a mental age of from 84 to 143 months; or, if a child, with an I.Q. of 50-74.

What the Intelligence Tests Test

The intelligence tests test general intelligence, which means reasoning and thinking or the use of memory and associations, which depend on past activity, such as reading, listening and other experiences. It depends not only on the original structure of the brain and its connections, but also on all experience resulting from training and education. Most intelligence tests so far worked out have been made for school children—which means school-work associations—and not for adults and an adult world. As a result of this, it is found that the average adult, using these tests, tests no more than 13 years; while the average school child of 15 passes not only the 13-year tests but the tests for 15 years also.

As the general intelligence which is measured by the intelligence tests does not develop much in those over 16, a mental age of 12, 13 or 14 on such a scale is not bad.

Furthermore, even when limiting the tests to school children, these tests do not take account of the emotions, mechanical abilities and other abilities such as initiative, moral perception, persistence, conscientiousness, regularity, self-confidence, shrewdness, etc.

What does this mean? It means that the I.Q. obtained by these tests represents only the particular ability to do these tests and nothing more. In other words, they are mainly tests for academic work and give, with a fair degree of accuracy, the grade school-children can reach in school, but they do not test all the qualities necessary for success and employment in the big game of life for adults.

And so we are forced to the conclusion that besides the I.Q., even with school children, we must know many other things —the past performances, both failures and successes; how and under what conditions the work is done, and the like.

Furthermore, the I.Q. may be normal or superior and yet the child may be failing in school work. What does this indicate?

It means that even with school children failing in school may be due to many different factors aside from constitutional (innate or acquired) intelligence defect, such as too much working at home for the mother, insufficient time for recreation and study, etc.

The diagnosis of backward children depends, therefore, on the intelligence tests, the school work, the home life and habits, the last two being the life test, as compared with the first or laboratory psychologic test.

The Number of Feebleminded

An estimate of how many socalled feebleminded we have depends on the definition of the term feebleminded and the arbitrary dividing line separating the normal and feebleminded. We could give a definition, if the standards be made sufficiently high, which would classify most people on earth as feebleminded. If we make the dividing line near 12 years, as measured by the intelligence tests, we will have more feebleminded than if we make it nearer 8 years.

Previous to the late World War, it was estimated that 2 percent of school children and about 1 percent of the average adult population were feebleminded.

In the drafted U. S. army in the late war, of 1,700,000 individuals examined, 45 percent were not over 12 years of age by the intelligence tests, which means that this is approximately true for the general adult population of the United States. Are these persons morons? That is, are they feebleminded?

If it be assumed that the intelligence tests can be applied to adults in exactly the same way as to children, we are led into complications. For example, if, in a person 16 years of age and over, an I.Q. of 70 classifies the person as 11 years old mentally, and an I.Q. of 75 as 12 years old mentally, then a classification of the drafted U. S. army leads to these figures. If all with an intelligence age below 13 years by these tests are called feebleminded, then 47.35 percent of the white draft and 89 percent of the colored draft were feebleminded; if those with an I.Q. less than 75 are called feebleminded, then 30.3 percent of the white

and 79 percent of the colored draft were feebleminded: while if those with an I.Q. less than 70 are labelled feebleminded, then 17.6 percent of the white and 64 percent of the colored draft were feebleminded, and if we lowered the standard we would classify a lower number as feebleminded. It all depends, therefore, on how the term "feebleminded" is used.

There is today, in fact, no satisfactory definition of mental defectiveness, or feeblemindedness. For adults, there is a general tendency to adopt the social definition of the Royal College of Physicians of London, namely: a feebleminded person is "one who is capable of earning a living under favorable circumstances, but is incapable, from mental defect existing from birth or from an early age; (a) of competing on equal terms with his normal fellows; or (b) of managing himself and his affairs with ordinary prudence." This definition is admittedly vague. It does, however, make social efficiency rather than intelligence alone the test of mental competency. According to this definition, the people tested in the army who were found not more than 12 years old, mentally, by intelligence tests, would not be classified as feebleminded, since they had been law-abiding, self-supporting members of the community.

The usual history of a feebleminded child is as follows: He lacks initiative and is unresponsive; there may be delay in teething, walking, talking, using the hands, getting normal habits—in other words, a prolonged infancy period; school progress is slow; the child is teased or "picked on" by his playmates, is inclined to associate with younger children and is generally easily influenced, has poor judgment or reasoning and finds it hard to get along; at puberty and adolescence he is unusually susceptible to sex temptations, being easily led by others, especially older persons.

The Former Attitude Toward the Feebleminded

In France, Itard, in the early part of the nineteenth century, tried to improve an idiot by training, but did not achieve much success; later, his pupil, Seguin, believing in the curability of feeblemindedness, resorted to physiologic education of the senses and training of the muscles. Although Seguin's original idea of the curability of feeblemindedness was incorrect, his work was responsible for the development, between 1850 and 1900, of training schools for the mentally deficient, particularly in the United States.

Then came the spread of the eugenic movement, the rediscovery by de Vries of the Mendelian laws of hereditary, and the introduction of the Binet-Simon tests for intelligence, so that, by about 1910, it was claimed that feeblemindedness was a Mendelian unit, was inherited as a recessive trait and was preventable by segregation and sterilization of the existing feebleminded. It was asserted that mentally defective children lack self-control; are very suggestible and at the mercy of bad companions; become delinquent, especially habitual criminals (of whom 25 to 50 percent were said to be feebleminded); that they were responsible for a large proportion of habitual inebriety, prostitution, illegitimacy and pauperism; in fact, that every feebleminded child is a potential criminal, unable to get or keep a job and support himself, and that feeblemindedness was, in all cases, inherited as a Mendelian unit.

The measures suggested for controlling feeblemindedness included segregation for life or during the reproductive period, sterilization, restrictive marriage laws and customs, prevention of conception, eugenic education of the public and of prospective marriage mates, etc.

Present Attitude Toward the Feebleminded

About 1915, the views began to change. There was increasing uncertainty as to the inheritance of mental defectiveness as a Mendelian unit and it was realized that the previous views were based on investigation of persons of the worst type, the lowest grade, the most troublesome—those whose condition was most apt to be inherited—but that they were not necessarily applicable to all feebleminded. It was finally admitted that considerably over half the cases of mental deficiency are non-hereditary but due to brain disease, brain injury and ductless gland disorders, and that practically all cases of idiocy were non-hereditary but the result of central nervous system disease or injury. Even in institutions for the feebleminded, as at Letchworth Village, N. Y., it was found that at least half the cases were non-hereditary, and it was certain that the extra-institutional cases gave a still higher percentage.

The causes of feeblemindedness are now conveniently classified thus:

1.—Accidental—often of unknown origin,

although the parents may be normal; illness or weakness of the mother during pregnancy or of the father at the time of conception; injury to the head of the infant at birth; falls and blows to the head in infancy; encephalitis and meningitis associated with the infectious diseases of infancy and childhood; syphilis in about 6 percent of cases; ductless gland disorders, as in cretinism and mongolism.

2.—Hereditary type: familial; transmitted as a Mendelian unit.

Most non-hereditary types are now regarded as orderly, obedient, trustworthy, teachable and industrially inclined persons and this is true even for many of the hereditary type; also, in most cases of the former type, no socalled stigmata of degeneration are to be found. Highly intelligent parents may produce morons and morons may produce normal children. The Lombroso theory of the "born criminal" is now practically given up, early surroundings are held responsible and it is admitted that there is no necessary relationship between feeblemindedness and delinquency.

Even though arrested offenders are a selected group (since the least bright get caught), less than 10 percent of arrested delinquent children (as in a series of 500 studied by Bronner, in Boston) were found feebleminded, and more than 90 percent were mentally normal. It may therefore be admitted that there is probably as much immorality among normal as among feebleminded persons, but that the least bright, lacking in initiative and judgment, get caught.

The importance of extra-institutional training in school, home and social environment is now recognized. The late Dr. Fernald, as a result of his long experience at Waverley, Mass., expressed the current opinion when he said, "Those defectives whose defects are recognized while they are young children and who receive proper care and training during their childhood, are, as a rule, not especially troublesome after they have been safely guided through the period of early adolescence."

The extra-institutional colony plan for feebleminded delinquents has, for some twenty-odd years past, been developed to a high plane in the Rome (N. Y.) colonies for boys and girls. The patients are assigned, under supervision, to small farms, in small groups, under as normal conditions as possible; for their work they are paid a salary, have savings accounts, pay for their own board and lodging and clothes, receive spending money, etc. Following a period of colony residence, they are given a parole and finally discharged, if and when found desirable. The results have been very successful in redeeming delinquent defectives. The patients are trained in farming and industrial occupations, lead practically normal lives and became dependable, self-respecting, reliable and self-supporting.

Socialization, after all, is not a matter of intellectual endowment alone but of behavior (depending on personality and environment), with the capacity for adjustment.

Even if we cannot increase the intelligence status of the feebleminded, the question is: can they be socialized?

The only types that need permanent institutionalization are those of too low a grade of feeblemindedness to be sufficiently improved, some who are too unsocial to do much with and those who have been neglected too long and are morally antisocial.

The Public School and the Backward Child

This work has been carried back to the school, home and community.

We have the same duty to provide training for backward and defective children, according to their ability, as for normal or exceptional children. Studies show at least 2 percent of school children to be sufficiently backward to require education by special class methods. The earlier such persons are put under proper training, the better, especially in the kindergarten or preschool period.

Children should have a routine mental as well as physical examination not only on entering school but in the preschool period.

The education of backward children should consist of training in habits of personal cleanliness, sense training, manual, physical, vocational and industrial training, gardening, academic work not beyond the limit of their ability, and speech training when necessary and valuable.

Bernstein, in the Rome colony in New York, found that adults with an intelligence age of 8 years and even less make good as law-abiding, self-supporting citizens; and it has been found that over 80 percent of the feebleminded in the public schools are 8 years and more mentally.

It is now known that the socializing of the feebleminded must take place in the

community; that "good common sense" is not necessarily associated with mental age; that aside from intelligence, social fitness depends on personality and the ability at self-support, self-management and self-control.

If the feebleminded are not properly trained and placed in occupations, they become discouraged or delinquent through repeated failure, with bad habit formation. On the other hand, it has been shown that defective persons with a mental age of from 6 to 10 years, who are properly trained and protected during the formative years, as a rule become well-behaved and useful adults.

The plan for handling the feebleminded, therefore, may be thus summarized: recognize them early; the more difficult types (marked defectives and delinquents) to be sent to institutions, and then to a colony for training, followed by parole and discharge under supervision; the others are to be educated and trained in the public-school special and regular classes, with special stress on manual and industrial training, especially from 12 years of age on, with eventual occupational placement.

The claim that leaving the feebleminded in the community will mean more marriages and propagation of the mentally deficient can be discounted, since the feebleminded have always been with us, and furthermore, they can be taught prevention of conception.

Summary and Conclusion

The current attitude toward the feebleminded is substantially as follows: Whereas, it was formerly erroneously believed that all the feebleminded had inherited their condition, were potential criminals, were not self-supporting, and required permanent segregation in institutions, it is now realized that a large number of feebleminded result from conditions which are accidental and acquired from birth and early childhood diseases; that such feeblemindedness is not inherited and comprises more than 50 percent of the feebleminded; that there is such a large number of feebleminded (at least 2 percent of school children) that in three and one-half million population, for example, there are at least 60,000 intellectually subnormal; that less than 10 percent of these are vicious and even many of these are so because of neglect; with training and supervision, most of them are well-behaved; that delinquents, even in jails and penitentiaries (as in New York) show a relatively low percentage (7.6) of definite feeblemindedness, and if the borderline and dull normal are added, the percentage is only 20.3; that the vast majority of feebleminded persons can be properly placed industrially, especially at unskilled labor, and when so placed become loyal, patient, routine workers; that permanent segregation in institutions is necessary only for the lowest grade of feebleminded, the vicious and the incorrigibly delinquent, while training in a colony of two to four years, is necessary for many others, in academic education, simple trades or domestic duties, when they may be given parole and later discharge. Surgical sterilization of the large number of feebleminded is not practical or advisable for universal application—it would not solve the problems and has other objections.

In the examination of a backward child, we must be most careful before diagnosing feeblemindedness when only pseudofeeblemindedness exists. In all cases, take a complete history, including family history; the health of the parents, especially the mother, during the period of gestation preceding the birth of the patient; the details of birth (especially injuries); the infantile and early childhood development; the condition of the mother during lactation, if a breast-fed child; the development during the preschool and school periods; the possible relation of head injuries and of infectious diseases and of defects of eyes, ears, nose and throat; the menstrual history in females; the physical health and the habits.

The examination should be very thorough—general physical (of the body systems), laboratory, search for ductless gland disorders, organic neurological findings, intelligence tests, behavior and personality traits.

The therapeutic indications in each case will be individualized according to the findings in the history and examination.

Whereas true mental *defectiveness* is dependent upon brain pathology, gross or microscopic or still unrecognized, and is fundamentally irremediable, mental *retardation* is due to some removable handicap, bodily, emotional or environmental.

Training and supervision in the community, especially in the public schools, must replace segregation for the vast majority of the mentally defective.

As the moron cannot generalize, handle abstract ideas or general principles, the

solution of the moron problem lies in giving them manual rather than exclusively ordinary (reading and talking) training, with routine work and not the handling of critical situations.

Discussion

Dr. Maxmilian Kern.—The inherited and idiopathic forms of mental deficiency are probably of endocrine origin or may, perhaps, be due to maternal illness during pregnancy. Persistent thymus is rather common in these patients.

In these cases, it is frequently impossible to obtain a family history or even an adequate personal history, due to the mental incapacity of the patients.

Dr. Disraeli Kobak.—Feeblemindedness is closely allied to other forms of feebleness. These patients are usually below par in many ways, and an improvement of the general physical status may favorably influence the mental condition. Experiments have shown that ultraviolet irradiations raise the general mental status of school children.

While considering these subnormal persons, we must not forget that there are those who are supernormal. The problem of the genius has received far less attention than has that of the moron.

Dr. Alfred J. Mitchell.—Until we have determined the cause or causes of feeblemindedness we will lack a clear conception of the measures which must be adopted for its prevention and treatment.

Dr. Dietrich Klemptner.—The morons in our midst have a profound influence upon the general environment of every one of us. Most of our laws are made to control the misdirected activities of mental defectives.

Dr. Israel L. Sherry.—School children may be classified into four groups as to their mentality: Subnormal, normal, supernormal, and psychopathic.

There are now special classes for subnormal children, giving them physical, mechanical and vocational training.

We need special classes and special teachers for supernormal children. They learn so much faster than the ordinary child that the school work seems a joke and they become indolent and insubordinate and look down upon their instructors.

The psychopathic child, *if recognized as such*, can be protected and saved from later insanity. We must study the variant children.

Physical health and active mentality go together. If ultraviolet rays improve the mental condition of a child, that is a proof that the backwardness was due to physical defects. This type of backwardness can be helped in many ways.

Dr. Karl Thorsgaard.—We need to consider the feebleminded from the standpoint of *pathology*. Each case should be carefully *studied*. Only so can we hope to determine the underlying factors.

The problem is not one of training or of segregation—though these have their place and value. It is a biologic problem. We must improve the familial stocks, as has been done with the lower animals.

Dr. L. Cardinal Quinn.—The present plans for testing the intelligence are inadequate, because they are based upon school work, and the training in our schools is largely unrelated to life. They may help in classifying individuals *for training*.

Home environment and the endocrines have powerful effects upon the mental status. The feebleminded can not concentrate and cannot reason. This defect appears early in infancy.

There seems some merit in the suggestion which is tentatively advanced from time to time, that hopeless, helpless idiots should be legally removed.

Dr. B. F. Croutch.—During the war, some of the men who had been the "town fools" did fairly well in the army. What have poverty and unfavorable environment to do with feeblemindedness? It sometimes appears as though mental deficiency were due, in large part, to the ignorance of the parents.

Dr. C. D. Collins.—The human being must be studied as a whole, not merely the mind.

Those persons who are most ill-favored, physically (and this includes most of the mental defectives), are unattractive to the other sex and so have no normal and rational sex outlet and are prone to fall into anti-social habits—they *steal* sex gratification as they steal other things, because they cannot get them in the usual way.

Inadequate physical functioning determines low mental functioning. The general nutrition should be kept high and well-balanced. Cod-liver oil, malt extract, iron iodide and phosphorus are great helps. If we study our drugs from the biochemic standpoint, and study the endocrines and their uses, we can go far toward improving many socalled feebleminded.

Dr. George B. Lake.—We need to devise some tests for determining an individual's initiative, morale and ethical status.

We hear much about crimes committed by "morons". The crimes of a mental defective are *impetuous* crimes, resulting from lack of normal, adult inhibitions, not crimes of premeditation. The true moron may *overindulge* sexually, but he is rather *less* prone to commit sex *crimes* than are some other types of persons.

Uncontrolled sex impulse is a psychopathy rather than an evidence of feeblèmindedness. In fact, in these latter cases, the enfeeblement frequently includes the sex desire. Economic pressure does not drive *normal* women into prostitution, in this country, and statistics compiled from the statements made by the *filles de joie* are, obviously, wholly unreliable.

Feeblemindedness is not a matter of performance; it is an abnormal *outlook on life* and is not amenable to education. The *brain* may become diseased or lose its functions, in part or completely, but the condition of the *mind* which uses that brain is wholly unknown to us.

Endocrine disorders, trauma, infections (such as encephalitis) and other things may disturb the physical instrument through which the mind manifests, and such conditions may be, to some degree, remediable. But there is another type of "mental defective" which is beyond our help—the one who is essentially a savage (undeveloped) mind or soul, living in what appears to be a civilized body.

It is important to teach these unfortunates to do all that they can and to protect them, so far as possible, from *stresses* of all kinds. Many can be reclaimed, to some extent. Birth control and the teaching and practice of eugenics are also of serious moment in this connection.

Let us remember that the people we are discussing are *not insane* and are usually not at all dangerous to their neighbors; and let us drop the old word, "feebleminded", which really means nothing at all definite and has distressing connotations, and speak of these patients as *mentally or psychically subnormal.*

Dr. Meyer Solomon. (*Closing*)—Feebleminded persons have *less* sex urge than have normal persons. Their psychic tone is lowered throughout. The "successful" man has a powerful sex urge, along with the psychic force which drives him on in other lines. Many prostitutes have absolutely no sex feeling.

Many mental defectives show no physical abnormalities, while others do have them. There is no more variation in this regard than is found among normal persons. Autopsies show no specific lesions.

In spite of public opinion to the contrary, the average mentally defective person, having a mental age of eight years or over, can be made a safe and useful citizen, even if he can not be restored to normal. Some institutions for the feebleminded are doing good work but most of them are giving the cases merely custodial care, with little scientific study.

Malnutrition and unfavorable environment may produce a *backward* child—pseudo-feebleminded. The true mental defective is an entirely different problem and does *not* yield to physical treatment, no matter how good and how reasonable it may be.

Be very careful about making a diagnosis of mental deficiency. Watch and study the patient for years, if necessary, using every method for finding out the truth. Perhaps the child is only backward. If there really is a mental defect, take steps to secure the best training available.

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31 North State Street.

The Successful Treatment of Bronchial Asthma in Children

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BRONCHIAL asthma in children is a condition that has baffled clinicians and laboratory workers for many years. Observers in many countries have been searching for something definite, whereby the etiology, pathology, diagnosis, and treatment might be definitely established.

We recognize asthma as being characterized by sudden paroxysms of severe dyspnea, accompanied by some signs of bronchitis of varying degrees and recurring at intervals of varying lengths. Many physicians are of the opinion that very young infants do not suffer from asthma, and a diagnosis of bronchitis or pneumonia is usually made. Recurrent attacks of dyspnea without a rise in temperature and with the lungs containing sibilant rales which gradually clear up in from one to three days should be looked upon as asthma, no matter how young the infant; and the cessation of rales after the injection of epinephrin will prove the diagnosis.

Family History

In studying the etiology of asthma we have found a history of ancestral asthma in about one-third of the cases. Adam's cases gave a family history of asthma or allied disorders in 20 percent; Goodhart and Spriggs, 21 percent; Berkhart, 16 percent.; Salter gives 38 percent, but this is probably too high for he says; "It is a curious fact that several brothers and sisters in a family may be asthmatic without the parents having been so". Many of these children who develop asthma are examples of Czerney's exudative diathesis, with a low-grade glandular hypertrophy of the tracheobronchial or cervical glands, enlarged tonsils and adenoids, or a congestion of the mucous membrane of the nose and paranasal sinuses. Often their previous illnesses have been frequent colds, attacks of urticaria, gastrointestinal disturbances, unstable nervous systems resembling spasmophilia and, lastly, susceptibility to foreign proteins.

Pathologic Changes

Until very recently, asthma has been looked upon as a disease having no pathologic changes, due to the fact that it was considered to be a neurosis. Pottenger, however, states that asthma has an essential pathology consisting of a thickening of the entire bronchial wall, which at times almost obliterates the lumen of the tubes. This thickened musculature results from an overstimulation of the physiologic process, for the vagus nerve is in a state of hyperirritability; consequently, these tissues are subject to prolonged vagus action. He further states that the following subjects require careful consideration.

1.—The susceptibility of the patient to react to causative agents:

(a) Hyperirritability of the bronchial division of the vagus nerve.

(b) Relative increase in potassium as compared with calcium ions in the cells of the bronchi.

(c) Changes which disturb the balance in either the nerve mechanism or the ion content of the cell.

2.—Substances which irritate the patient —pollen, animal emanations, foods, etc.

3.—Inflammation which causes reflexes to express themselves in the branches of the vagus, such as those arising in the nose, sinuses, gastrointestinal tract, and even the lung itself.

4.—Such stimulating factors as are associated with climate change—physical and chemical irritants.

According to Chandler Walker, protein irritating the upper respiratory tract of sensitized animals stimulates the constrictor fibers of the vagus, producing a stenosis of the small bronchioles by spasm of their circular muscles. It is Walker's belief that food proteins, after absorption, act in a similar manner.

The Nature of Asthma

Haseltine and LaForge have the following to say regarding their conception of asthma:

1.—For the production of an attack of bronchospasm there must exist a reflex arc, consisting of a peripheral sensory nerve, connecting through its nucleus with an

efferent motor nerve supplying the muscles involved in this spasm.

2.—The reflex arc which makes bronchospasm has its peripheral orgin in the ethmoid area of the nose. These sensory fibers are found in the superior maxillary and ophthalmic branches of the trifacial nerve and pass backward to the deep medulla, where they exchange fibers with the nucleus ambiguus and dorsal nucleus, which are the motor nuclei of the vagus nerve. This is the only reflex arc capable of inducing bronchospasm.

3.—The factors essential to the production of a spasm are: An acute or chronic exposure of the nervous system to a toxic agent; and an abnormally excitable peripheral sensory organ.

4.—With the exception of trauma, every spasm is the effect of a toxin on the nervous system.

5.—There is only one type of asthma. The classification into bacterial, food, pollen, and animal emanation types is arbitrary, incomplete and futile. Violent bronchospasm is sometimes precipitated by road dust, carpet sweepings, strong perfumes, the inhalation of face powder, or the strong odor of a smoker's pipe. According to the above classification, each of these exciting substances would constitute a different type of asthma, and the number of types would be limited only by the number of substances that could induce an attack. This classification, therefore, is not a classification of basic types of asthma, but is merely an enumeration of a few of the very many substances which can precipitate an attack of bronchospasm.

6.—The only type of asthma that exists is toxic asthma. Toxemia is the only factor that is common to all the socalled types. Just how much this toxemia is due to faulty metabolism, and how much to septic absorption is difficult to say, but both factors are present in most cases.

7.—Every asthmatic hangs in a state of delicate balance between the absorption and the elimination of toxins. An attack of asthma is the crisis of the toxic storm. It is the localized pulmonary expression of a general toxemia.

8.—Exclusive of thoracic pathology, asthma is curable in direct proportion to the completeness with which two things can be done: first, remove the sources of infection; second, restore normal elimination.

According to Brown there are four different clinical types of asthma occurring in infants and children:

1.—Cases which in the beginning resemble acute bronchitis, this type being frequently seen in young infants.

2.—Catarrhal asthma, or those following in the course of bronchitis.

3.—True asthma, classed frequently under the heading of acute spasmodic bronchitis.

4.—Hay asthma.

Huber and Koessler, in 1921, made histologic studies of the finer structures of the bronchi, and found, in certain cases, hypertrophy of the mucous gland system, and in others, hypertrophy of the smooth muscle system.

Sidney Yankauer noted an edema of the bronchial mucosa, with isolated areas of hyperemia.

Review of the literature fails to reveal any classification by rhinolaryngologists which would tend to differentiate the various types of asthma and enable the rhinologist to determine in any given case of asthma whether or not it is susceptible of improvement by rhinological treatment, until 1926, when Bishop reported before the American Laryngological, Rhinological and Otological Society the classification adopted by him while working in the nose and throat section of the Massachusetts General Hospital, in contact with Dr. Rackemann's Anaphylaxis Clinic, and applied for the five years following. He states that the nose and throat have an etiological relation to bacterial asthma, as causative factors, in proportion as they are found to contain sources of infection responsible for the asthmatic condition. He further states that the site of irritation or stimulation may be in the nose, notably in hyperplastic ethmoiditis.

A diagnosis of asthmatic bronchitis should be made in all cases of asthma accompanied by signs of chronic bronchitis. This type is the one usually found in older children and adults. It follows either severe infections of the respiratory tract or repeated attacks of bronchial asthma followed by infection.

In our experience the first attacks of asthma in infancy can usually be traced to a change in diet, with egg, cereal or milk involved in that order of frequency. In early childhood the pollens and animal extracts are the next most common offenders. In late childhood we find frequent attacks of

bronchitis, pneumonia, influenza, pertussis, measles and chronic sinus infections to be the most common diseases preliminary to a chronic bronchitis with asthma. Some authors are of the opinion that the local bronchial infection acts directly upon the sensitized nerve endings causing spasm, or that the vagus is irritated by the inflammation and enlargement of the tracheobronchial glands.

The Basis of Treatment

The purpose of this paper is to discuss a method of treatment which has proved successful in all of our patients.

It is our belief that asthma is a combination of two factors; that it is a toxemia and an infection of the ethmoid cells. When we eliminate the toxemia and relieve the infection in the ethmoid cells, the asthma symptoms diminish and the patient will recover. This treatment is carried out without any skin tests for food poisoning or susceptibility to pollens or animal emanations and it eliminates the giving of serums and vaccines. The anatomical basis is that the terminal fibers of the fifth nerve in the nose, and pharynx, or of the vagus in the external auditory meatus become irritated and asthma is the result.

We were led to the investigation of this phase of the asthma problem by the work of Haseltine, who for many years has labored on the theory that asthma is a toxic condition.

Haseltine states that the peripheral nervous structures most intimately connected with the respiratory mechanism are the intranasal tissues, especially of the ethmoid area. These considerations, with a study of the clinical manifestations, lead inevitably to the conclusion that in the phenomenon known as bronchospasm the two producing factors are:

1.—A general toxic condition, chronic in nature, vaguely recognized under various names but present to some degree in all cases. (Toxemia, anaphylaxis, toxicosis, allergy, atopy, acidosis, sensitivity, etc.)

2.—An abnormally irritable peripheral sensory organ which, in this instance, is the ethmoid area of the nose.

I shall quote at length from Haseltine's recent article in regard to the second point.

"Few questions in clinical medicine are so clouded with conjecture and confusion as the question of the relation of nasal pathology to bronchial asthma. Few subjects are today more productive of loose, controversial and erroneous assertions, all of which are, with our present knowledge, quite uncalled for. A proper consideration of now established facts will end both the conjecture and the controversy. Such a consummation is highly desirable because this confusion and controversy has done and is still doing great harm in two ways: Many patients who could be helped by correct nasal treatment are being denied it, while many others are being subjected to useless and harmful operations.

"For fifty years it has been known that nasal surgery is sometimes astonishingly beneficial in asthma but the determination of what surgery should be done or in what cases, has remained largely conjectural. The result is too often a sacrifice of important nasal structures in a blind attempt to do that unknown thing which is sometimes so dramatically helpful. Observation of the results of these mistaken efforts naturally leads, sometimes, to the opposite attitude of blind skepticism which is perhaps equally harmful.

"No possible good can be served by the publication of articles so open to criticism as that of Kahn, for instance, in a recent issue of the *Journal of the American Medical Association*. His statement that no case of asthma is influenced by any nasal operation can be refuted by so many readers that it renders his whole testimony worthless. When he says he knows of no analysis of a series of cases to show the result of nasal operations in asthmatics he professes an ignorance so complete that he taxes our credulity. Bosworth's classic study of eighty cases has been common knowledge for thirty-six years. Francis' report of 400 cases was published in 1903 and at least two such reports have been issued by the Mayo Clinic.

"In none of the series reported has the rhinologic work been so good as would now be possible but the results sufficiently dispose of Dr. Kahn's assumption. Articles like the one cited, written to argue a point, admittedly without a proper study of the subject, only emphasize the need for clearer statement of those facts no longer subject to dispute which may be summarized briefly as follows:

"1.—Anatomically there is a neurologic connection between the sensory nasal structure and the bronchiolar musculature, fulfilling all the requirements of the reflex arc we have described. They may occur through either the ophthalmic or the superior maxillary division of the trigeminus, either with or without a relationship to the sphenopalatine ganglion. Through the sensory root of the trigeminus, by means of collateral neurones of the second order, a synaptic relationship is established with the motor neurones of the vagus nuclei which send efferent impulses to the musculature of the respiratory passages. These impulses may be to some extent subject to voluntary inhibition but are usually involuntary and the association with the cervical sympathetic through its connection with the vagus is intimate.

"2.—Physiologically there is a close connection between the nasal and thoracic

structures through this arc, shown by the sneeze, cough and disturbance of cardiac rhythm resulting from irritation of certain limited areas within the nose (the ethmoid region). Two other well-known reflexes are produced through this arc, namely, the sneeze produced by strong illumination of the fundus oculi and the oculocardiac reflex described by Guillaume and others. As these are both transmitted through the ophthalmic division the sphenopalatine ganglion is in no way involved.

"That the cough reflex is a physiologic analog to the bronchospasm is suggested by another striking phenomenon. The well-known 'ear cough' is due to excitation of the auricular branch of the vagus (Arnold's nerve) supplying the lower posterior external auditory canal. Normally irritation of this nerve causes a fit of coughing and chronic coughs sometimes result from chronic irritation at this point. In some asthmatic patients bronchospasm is promptly produced by irritation of this area and cases have been known in which asthma was relieved by removing cerumen from the ears, returning when it accumulated and being relieved again in the same way. It is possible that in such rare cases the ethmoid factor may be absent. So simple and so obvious is the explanation for what, to the ignorant, would seem a fantastic notion —'curing asthma by syringing the ears'.

"3.—Clinically the connection between ethmoid and thoracic structures is shown by three distinct phenomena: (a) In susceptible individuals the attack of bronchospasm is readily and immediately induced by mechanical irritation of the ethmoid area; (b) When brought on in this way it is promptly checked by cocainization of the same area. Indeed this is one of the most effective measures for temporary relief of any bronchospasm and this effect is not produced by the use of cocaine in any other known area; (c) When a bronchospasm is induced in this manner, there is a distinct lateralization of the spasm and always to the side on which the irritation is produced. In patients showing marked predominance of nasal pathology on one side, there is usually definite preponderance of bronchospasm on the same side. This observation, independently made by LaForge, corresponds exactly with that previously made by Adam and called by him isolateral bronchospasm."

Adam likewise is an exponent of the toxic theory and has been treating his cases on this basis.

Case Reports

I am indebted to Dr. Haseltine for the reports of the following cases:

N. J., aged fourteen, gave a history of severe bronchial asthma of eight years' duration. He had been under treatment at various places. On examination he was found to have a chronic, bilateral suppurative ethmoiditis, with secondary antrum involvement and possible but not probable sphenoid infection. There was also a mild chronic appendicitis which was probably a factor in producing the slight intestinal toxemia which was present. Uranalysis showed a moderate acidity with very slight indicanuria and low degree of carbohydrate intolerance. The blood picture was one of infection as shown by a leucocytosis with marked eosinophilia.

The nose infection was treated and general hygienic measures instituted. The asthmatic symptoms disappeared, the blood and urine findings became normal, the bowel condition cleared up, and the boy gained in weight and height.

Miss V. C., aged 13. Reported November, 1923, with continuous, extremely severe bronchospasm of four years' duration. Weight was fifty-four pounds, there being a gain of only four pounds in four years. Bronchospasms were so constant that they required from eight to twelve hypodermic injections of epinephrin per day, in doses of from eight to fifteen drops.

Patient received a course of elimination treatment and a nasal operation during a month's stay in the hospital. In the year following she gained seventeen pounds in weight and has continued to gain. By September, 1926, she was entirely free from symptoms, and has remained so to this date (June, 1927).

These two cases are typical of the results that are being obtained. The following cases from my own service furnish additional evidence that treatment directed to the elimination of the toxemia and the correcting of the nasal pathology will benefit the asthmatic seizures.

Bertha G., age 5 years, referred by Dr. F. Firestone of San Francisco, with a diagnosis of asthma which had been present for three years.

Family history and previous illnesses negative. Asthmatic attacks began at the age of two years; as far as the parents knew a change of diet had had no effect on the condition. The attacks occurred every week or ten days and lasted from twenty minutes to a half or three-quarters of an hour, and were severe in type with wheezing, dyspnea, cough and occasionally vomiting.

Physical examination revealed no extranasal pathology, but hyperplastic ethmoiditis was present.

Treatment of the ethmoid region of the nose by means of the Dowling pack was instituted; body exposures under the mercury vapor quartz lamp were given. The asthma disappeared in a few months after the institution of treatment.

Edward S., age 11 years, referred by Dr. V. Finsand, of San Francisco, with a diagnosis of asthma which had been present for five years.

Family history revealed the presence of asthma in the father and maternal grandmother.

Previous illnesses: Measles, mumps, whooping cough. Tonsils and adenoids removed at the age of nine.

Physical examination showed an underweight, anemic boy, with a slight systolic murmur at the apex of the heart, heart slightly enlarged to the left; hyperplastic ethmoiditis; otherwise negative.

Treatment of the ethmoid region of the nose was instituted, together with body radiations from a mercury quartz lamp, together with proper elimination, food and rest.

The asthmatic attacks entirely disappeared following treatment.

Florence J., age 7 years, referred by Dr. H. Crabtree of San Francisco with a diagnosis of asthma which had been present for two years. Attacks came on every day or two, lasting for five to seven minutes, not relieved by anything but epinephrin. Hyperplastic ethmoiditis was present.

She was entirely relieved by intranasal treatment, combined with the sun-lamp exposures.

Isabel T., age 13 years, referred by Dr. G. Bluhm, of San Francisco, with a diagnosis of asthma which had been present since early childhood. The mother said the child had always had wheezing spells and difficult breathing, although no attacks of asthma were noticed. There was a history of asthma in the family on the father's side, but the parents never had asthma. One aunt died of tuberculosis. The previous illnesses were mumps and measles, and a mastoid infection following scarlet fever.

Physical examination showed a systolic murmur at the apex of the heart, transmitted to the axilla, some cervical glands enlarged, enlarged tonsils, and hyperplastic ethmoiditis. The tonsils were removed, and intranasal treatments begun. The wheezing spells and severe dyspnea entirely disappeared.

These are but a few illustrations of what is being accomplished. Our findings are corroborated by Haseltine, Adam, Bishop and others who have followed this method of treatment.

Treatment

In treating the acute attack of asthma, hot packs applied to the thorax will often relieve the spasm sufficiently to reduce the respiration. Epinephrin chloride, given hypodermically, is a useful drug to combat the severe dyspnea.

The general or interval treatment of these patients should be handled as follows:

1.—A careful history of the child's present and previous illnesses should be taken, investigating also the illnesses of parents and near relatives.

2.—A complete physical examination should be performed, investigating particularly the ethmoid region of the nose.

3.—Complete laboratory examination should include a blood count, urine examination, and an x-ray picture of the lungs. Measures should be taken to correct all pathologic changes.

4.—Investigation of the ethmoid region of the nose by a competent rhinologist; if infection is present it should be treated by means of infiltrating the submucous tissues of the nose and ethmoid regions with a colloidal silver solution, according to the methods of Dowling of Albany and Haseltine of Chicago.

5.—The exposure of the body to the ultraviolet rays of a mercury vapor quartz lamp for the following reasons: There is evidence of metabolic changes in the animal body brought about by solar rays, in the fact that inorganic phosphate is brought up to normal by sunlight and also by carbon-arc irradiation. The ultraviolet rays seem to be necessary for the normal metabolism of the infant. Exposure to the mercury vapor quartz lamp appears to fix permanently the ionic calcium content of the blood serum. The lamp is raised about one meter from the patient and fractional body exposures are made two or three times weekly or oftener. The time of exposures, at first two minutes, is increased at each treatment by from two to three minutes, depending upon the tolerance of the individual. At each successive treatment the distance between patient and lamp is decreased by three inches. The smallest distance reached is about eighteen inches while the longest exposure made may reach fifteen minutes or, in exceptional cases, when the tolerance of the individual is great, twenty minutes.

Conclusions

Our results have been most satisfactory in handling asthmatic patients in this manner, and in conclusion I wish to state that every patient is a special problem; and it often requires the skill of several physicians working together, combined with the cooperation of the patient and his family, in order to arrive at a point where all can see marked improvement and an eventual cure.

We use no drugs internally, and the patients who have been taking large doses of epinephrin hypodermically soon are able to discontinue its use, are relieved of dyspnea, and sleep normally.

The important points in the treatment are the elimination of all sources of infection, and the restoration of normal elimination, and normal physiology.

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The Urological Headache

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HEADACHE is a symptom frequently met with in our daily practice and is worthy of careful consideration and study. More or less chronic persistent pain in the frontal or temporal regions may mean anemia, nephritis or uremia; hence, its cause should be determined, if possible.

Two of the most common causes of headache in nephritis are: uremia, causing a violent headache; and the accompanying vascular changes, the more frequent cause of the chronic form.

The severe headaches of nephritis, when not the result of vascular diseases, are generally regarded as manifestations of intoxication, which is usually indicated by the retention of one or more of the nitrogenous compounds, and can be readily ascertained through uranalysis and chemical blood tests.

If headaches are more or less persistent, especially in patients past forty, or if a migraine gradually grows worse, they should be looked upon with suspicion, and thorough examinations made by the clinician to rule out the possibility of gradually developing interstitial nephritis as being the causative factor.

A patient may seek advice because of weakness, or of a slight headache, with or without more or less vertigo, which may be danger signals of impending nephritis. As nephritis develops, pathologic changes in the heart and blood vessels may develop, producing two sets of symptoms, one associated with circulatory disturbances, and the other a symptom complex due to retained toxins, which may produce uremia.

At first the blood pressure may be but slightly increased but, as the disease progresses, there may be a corresponding increase of the blood pressure, especially the diastolic, a persistent increase of which is usually an accompaniment of renal disese.

At one time it was thought that uricacidemia was a reliable index of renal impairment, but it has now been proved that this does not constitute indisputable evidence of nephritis. In this disease there is a retention, not only of uric acid but also of urea, creatinin, and other nitrogenous compounds, all of which, according to Feinblatt, must be considered as factors in renal disease. Out of 1,500 blood analyses, he reported 47 patients who exhibited uricacidemia with urea and creatinin retention, and in 30 of these there were no signs of renal disease.

Holmes claims that, "since 1916, literature abounds in references to headache, migraine, uricacidemia, nephritis and gout. In many of these articles the occurrence of headache and vertigo in nephritis and gout is emphasized, but the occurrence of these symptoms in non-nephritic uricacidemia is not stressed."

Williams reported a group of 35 patients with hypertension and but slight evidence of nephritis. In 13 of this group, headache was the most prominent symptom.

Of 200 cases of nephritis reported by the Pennsylvania University Hospital, the chief complaint was tabulated as follows: Edema in 24 cases; dyspnea, 28; headache, 24; weakness, 22; disturbed vision, 14; convulsions, 11; pain in back, 10; vomiting, 9; albuminuria and thoracic pain, 8; pain in abdomen, 6; "out of sorts," 3; indigestion, 3; palpitation and drowsiness, 2; hematuria and enuresis, 1.

As a rule the list of definite symptoms of nephritis is brief but complete, such as pain, disturbances of micturition, and alterations in the urine. The other associated symptoms are more clearly related to the secondary results of disturbed renal function, hence uremia, with its great complexity of symptoms, is wholly a toxic phenomenon, explainable in most cases on the basis of secondary circulatory disturbances and retention of nitrogenous compounds, because of renal insufficiency.

Moschcowitz states that, "in the majority of instances, what the clinician means is not nephritis but renal insufficiency."

The nephritic headache may vary in intensity from that of a constant or intermittent cerebral annoyance to the violent headache of uremia, or the severe type simulating brain tumor. Collins reported a case of nephritis which he claims had all the symptoms of brain tumor and was difficult to differentiate. Olsen says that, "the severe headache (of chronic interstitial nephritis), accompanied as it often is with nausea, vomiting, dizziness and perhaps some mental disturbances may resemble the symptom complex of tumor of the brain, especially when an inflamed, swollen optic disk is discovered."

As is true with most chronic diseases, the nephritic headache is more easily prevented than cured. Inventory of one's health by a thorough examination yearly, or more frequently if necessary, will often reveal certain factors undermining one's health which may be indicative of possible nephritic involvement, and a suitable regimen may be instituted that may correct the condition in its incipiency, thereby warding off the headaches and other symptoms that may develop later. In most instances the trouble may be the result of living "not wisely but too well." One who continues to live on the high protein dietary resulting from too free indulgence in "the flesh pots of Egypt," or imbibing too freely at the shrine of Bacchus, or continued nicotization of the body through the popular weed, together with the effort to crowd into one hour the work of two, is a possible candidate not only for the headache of the morning after but that undesirable companion in later years, which may be as persistent as Banquo's ghost.

Nephritis must be diagnosed before renal insufficiency develops if much is to be hoped for from treatment. Thorough, repeated examinations cannot be too frequently emphasized. If recognized early, all focal points of infection, such as infected tonsils, teeth, etc., should be taken care of, the diet and fluid intake controlled, and elimination through the bowels and skin be stimulated so as to give the kidneys as much functional rest as possible. We have found the low-protein, nontoxic dietary most satisfactory for these cases and emphasize the importance of colon hygiene, as well as the taboo of all extraneous poisons that may be a factor in aggravating, if not causing, cardiovascular renal disease.

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Cell Function

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FOR thousands of years the only reason for employing a remedy in a given case was the belief that it had done some good in an earlier case which presented a similar chain of symptoms or signs. At times, because of lack of knowledge of the functions of the body and the cause and course of disease, erroneous ideas have developed.

At a time when excessive medication tended to divide medical men into five factions, Hahnemann developed the idea of infinitesimal doses, and as these doses were too small to produce any influence, the patient had a chance to get well without having to fight the disease and the mistaken efforts made in his behalf.

The next step came with the advance of chemistry that gave us new drugs and the active principles of old ones, so that their complex effects could be better separated, understood and employed. At the same time physiology and pathology began to discover facts which clarified conceptions of body functions and occurrences in disease.

The conception of the body as an aggregation of living cells may well be considered to have been a first step toward the more rational therapeutics of today; for this conception was shortly followed by the knowledge that, through differentiation and special development, each cell has its own particular function and form, and is susceptible to influences which fail to affect other special cells. It was knowledge of this nature which indicated why certain remedies acted upon one part of the body and not on others.

The physical, chemical, and physiologic state of the cells of the body may influence the effect of medicinal or poisonous substances, and if this is true it may be found that the cells of the body may possess properties which render them immune to the effects of such compounds, whether these compounds remain intact or are broken up. Thus immunity or susceptibility may be due to the fact that the composition of the cell may be so stable that the drug cannot destroy it. Its envelope may resist penetration of the drug, or, even if it is unable to resist penetration, its protoplasm may be of such a nature that the drug is not soluble in it.

The relationship of ions to the effect of inorganic drugs on the body has not been fully determined. When an electrolyte goes into solution its ions, on coming into contact with or entering the cell, produce certain effects or changes—stimulation or depression—by altering the electrical state.

Again, certain cells of the body, though they may be susceptible to a given substance if kept continuously in contact with it, nevertheless escape, because they are able to reject the substance as soon as it is taken up. Many cells, otherwise susceptible, escape because they have the power of oxidizing the substance in question or of otherwise destroying it before it can prove harmful. This is the explanation of the fact that alcoholics and drug addicts are able to tolerate doses which would kill an ordinary person. Their cells have had their oxidizing powers greatly increased by training. The cells of the body become accustomed to the presence of a given substance, provided its amount at first is not so great that the cell is at once destroyed. Conversely, the chemical constitution or function of a cell may render it especially susceptible to a given agent, in that its component part or parts have an affinity for one or all of the molecules forming the compound, as in the case of ether or chloroform, which combine with the lipoid or fatty portion of the cells of the higher nervous system and cause anesthesia.

In other instances a cell suffers, not because the agent is primarily deleterious but because the cell stores it until its quantity renders it poisonous in effect. So, too, cells may be affected because the compound hydrates or dehydrates, solidifies or liquifies them; or they are influenced by the drug because it dissolves out some essential constituent. The process of hydration or dehydration is usually due to the fact that a given substance possesses hygroscopic properties, or it results in obedience to the law of osmosis. Certain substances, in themselves of practically little power, may act as very powerful agents because of their dilution or concentration.

Certain cells, too, have socalled receptors, by which they become attached to the drug which influences them. This is particularly true in the case of complex protein poisons,

such as the toxin of diphtheria or tetanus, and it is also a fact in the case of many chemical compounds made synthetically.

The structure of the cell, anatomical or chemical, renders it susceptible to certain substances. Thus, methylene blue stains axis cylinders and sensory nerve-endings, whereas it fails to stain motor nerve-endings. Again, certain cells are not stained by a given dye in health, but are stained when diseased. The result of all these influences is that cells may be altered in function—stimulated, depressed, or perverted. They may also suffer organic changes which result in temporary arrest of function or in death.

The susceptibility of cells depends, in many instances, solely upon their vitality; many substances affecting living cells fail to affect or enter dead cells, and vice versa. This is probably due to some change in the anatomical or chemical construction of the cell, and in some instance it is probably due to the presence of oxygen in or about the living cell. Paraphenylendiamine, injected into the blood, stains deeply brown the central tendon of the diaphragm, the muscles of the eye, larynx and tongue. This is because the cells in these areas are so highly endowed with bloodvessels that they contain an excess of oxygen, and not because the cells have any special predilection for the dye. Ehrlich believed that susceptibility is also influenced by the chemical environment of the cell, not only as to oxygen, but as to the alkaline or acid reaction as well.

Thus the cell doctrine gave the first clear conception of vital function, and with the study of the functions of special aggregations of cells, or cell physiology, has led to the understanding of the physiologic effect of many remedies.

Drug Action

A medicinal substance may exert an influence on the body in many different ways. First, it may act in its original form upon those cells of the body which have a special affinity for it, or, on the other hand, it may be inactive until it is split up in the body into its component parts, which separately may act upon one variety of cells or on different varieties.

Potassium bromide, potassium iodide, or potassium cyanide set free bromine, iodine or cyanogen in the body respectively, and these act powerfully, whereas the potassium base produces little or no effect. Much depends upon the readiness with which this 96.6 percent of iodine is liberated; in that breaking up occurs. In the case of iodoform, of iodol, 50 percent; in that of europhen, only 28.5 percent.

The component parts of a drug may be dissociated and form new compounds, producing physiologic effects not possessed by the substance as originally given. In hexamethylenamin, the effect of the drug is not exercised as urotropin, but as formaldehyde, which when excreted acts as an antiseptic.

The readiness with which a drug is broken up in the organism greatly affects the quickness and severity of its influence. Phenacetin and acetanilid do not act as such but only after they have become changed into paramidophenol by oxidation; and, as phenacetin undergoes this more slowly than acetanilid, it is less powerful as a drug and less active when given in poisonous doses.

In the nitrite group, amyl nitrite acts instantly; nitroglycerin acts a little more slowly; nitrite of sodium and of potassium still more slowly; and erythrol tetranitrate more slowly than all the others. In each instance the action is identical in kind, but different in degree, because of the chemical stability of each compound. Conversely, many substances possessing a chemical formula indicative, at first sight, of great physiologic power are nevertheless inert, because they are so stable that they are not broken up in the body.

It is possible, by changing the chemical formula of a substance, to alter its physiologic influence greatly, not only in degree, but in kind, and to such an extent that it will no longer affect one part of the body, but will influence parts which, in its original form, it did not touch. Thus caffeine, which is trimethylxanthine, increases the functional activity of the heart, the respiratory center, the brain, and the muscles, and possesses a moderately stimulant effect on the kidneys; whereas, theobromine, which is dimethylxanthine — containing one less methyl molecule—has little effect upon any part of the body except the kidneys, which it powerfully stimulates. Baumann and Kast found that sulphones not decomposed in the body are inactive; those which are decomposed when combined with one or more methyl groups are likewise inactive; whereas, if one or more ethyl groups are substituted, they become powerful hypnotics, as sulphonal, trional, and tetronal.

Specific Antiseptics

It remains to discover what can be done to destroy parasites by giving remedies which will, because of the peculiarities of

the protoplasm of the invaders, destroy them without destroying the cells of the host.

It is manifest that if certain drugs have a powerful affinity for certain cells in the body, it is probable that there are discoverable substances which will have a special affinity for invading cells, and, by attacking them exclusively, destroy them alone. To the task of obtaining these substances Ehrlich and his co-workers have set themselves, with brilliant results.

Ehrlich started out with the hypothesis that for any substance to act upon a cell it must become intimately connected with it or fixed in it, and that this fixing can take place only by virtue of the fact that the cell has a receptor by which it may be attacked. The receptor which takes the chemical substances is called a chemoceptor. Consequently only those cells which have a receptor fitted to grasp a given chemical agent can be affected by it. On this basis Ehrlich sought to find drugs which would unite with the protoplasm of an invading parasite, but be unable to damage the body cells—that is, for substances which would be parasitotropic, but not organotropic.

Ehrlich further showed that by forming several groups of chemicals into one fairly firmly connected compound, the cell of an invading parasite, though having a receptor for only one group, would nevertheless fall a victim to all the members of the group, although each of the other members of the group might have been unable to unite with the cell if by itself. Thus in the case of arsphenamine, which is dioxydiamidoarsenobenzol, the excess of the orthoamidophenol fixes the drug to the parasite, and so the trivalent arsenic group is enabled to reach the arseno-receptor of the cell of the spirocheta. But the beneficial effect does not stop here, for the destruction of the parasite results in the formation of antibodies, which destroy any spirochetae which may have escaped. Ehrlich followed "606" with "914", neoarsphenamine, a compound not quite harmless to man, but possessed of an extraordinary affinity for the spirochetae of syphilis—so great an affinity, indeed, that one large dose may be capable of destroying every spirocheta in the body of an animal[1].

Insulin acts because it can act for harm as well as for good; and this applies as well to arsphenamine, to antitoxins for scarlet fever and diphtheria, to sedatives and to dye substances. These preparations must eliminate the invading organisms, but must not harm the patient. There has been presented a long series of numbered combinations of metals with organic radicals, of metal substances with dyes, and similar preparations—"606", "909", "Bayer 205", "Forneau 309", and "mercurochrome-220"—representing hundreds of trials before the achieving of even possible success—and now familiar to most physicians.

In the case of some of these remedies it has been found that they not only kill the bacterial organisms for which they are presumed to be specific, without harming the body of the patient, but also apparently render the body into which they are injected resistant to other infections. As can be demonstrated in the test tube, the drugs themselves do not have the power to destroy the organisms, but when they are taken, or injected into the body and combine with the blood and tissues, some change which results in the destruction of the parasite takes place.

There are preparations of bismuth which will not act when used alone, but which become exceedingly potent when mixed with extract of liver tissue. Here the tissues are the activating factor. Dale has observed that an amebic infection which readily yielded to emetine in man could not be so controlled when transferred to the cat. Something in the tissues of man that activated the emetine was absent in the tissues of the cat.

In studying the power of the body to resist and overcome disease, the impression has become firmly established that much depends on the cells being in a normal, healthy state. It is known that this condition of the cell may be modified by foreign substances injected into the body, such as nonspecific proteins; that certain poisons definitely inhibit the actions of certain cells; that substances, such as insulin, activate certain cells to perform unusual functions[1].

Therapeutics, together with many other branches of medical learning, is emerging from empiricism into scientific accuracy[2].

1.—Hare, Hobart Amory: Practical Therapeutics. Lea & Febiger, Philadelphia and New York. 1925.

1—American Drug Manufacturers' Association. Fourteenth Annual Meeting. New York City, April 20-23, 1925.

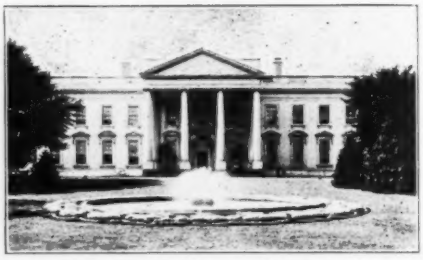
2.—Hare, Hobart Amory: Practical Therapeutics. Lea and Febiger, Philadelphia and New York. 1925.

Washington and the A. M. A. Meeting

By GEORGE B. LAKE, M.D., Chicago

THERE is probably no city in the United States that offers more inducements to the tourist and sightseer than does our Nation's Capital. Here are the seat of Government, the residence of the Chief Executive, many national and international monuments, stately Mount Vernon, a number of noble and beautiful public buildings, and a host of other places intimately connected with our Country's history.

Our Nation's Capitol.



The White House.

The New National Museum.

The Lincoln Memorial.

Here, too, are modern hospitals, the United States Hygienic Laboratories, the Congressional Library and the library of the Surgeon General's Office, two universities, the Army Medical School and many other institutions of the utmost practical interest to medical men, as well as museums and art-galleries of international renown.

It was, therefore, no surprise to find that the attendance at this, the seventy-eighth annual session of the American Medical Association, was larger than it has been for several years (6,210 Fellows of the A.M.A. registered). The number of wives and other relatives of the physicians in attendance was also unusually large, so that the meeting probably brought more than 10,000 persons to Washington.

We may have been spoiled by having all of the Association's activities practically on one floor and under one roof at Dallas, last year, but it did seem as though the meeting places of the various sections were rather widely scattered, especially for those who desired to hear papers read along a number of different lines.

As the Washington Auditorium was used as headquarters and exhibit hall, there remained no place in the city which could accommodate those who desired to attend the formal opening meeting, at which President Coolidge made a strong, appropriate and forward-looking speech. Several thousand persons were unable to gain admission to the Arcadia Auditorium and much confusion and a good deal of unpleasant feeling was engendered thereby.

The reception to the president of the A.M.A., at the Mayflower hotel, on Thursday evening, May 19, was also attended by a great number of people, but everyone was good natured and the party was very brilliant and successful.

Field Hospital No. 1, Pitched near the Washington Monument.

The Commercial Exhibit

The commercial exhibits were varied and interesting. The firms taking part numbered 135.

Physical therapy apparatus occupies an increasing amount of space at these meetings, and one of the most noticeable, and perhaps significant points in connection with such exhibits was the rapid increase in the development, in this country, of various types of carbon arc lamps for the production of ultraviolet rays. In Europe these sources of energy have been long in use, with satisfactory results, but here we have been using the mercury vapor arc in quartz almost exclusively. If the open carbon arc works just as well (and it seems to do so) it will popularize ultraviolet treatments, because the apparatus can be sold much cheaper and does not deteriorate, if used with mechanical judgment. A number of infra-red generators were also shown.

Among the newer things was a recording sphygmomanometer which will take the guess work out of blood pressure estimation. The apparatus is too expensive to come into wide use in private offices, but it looks as though hospitals and similar institutions would soon have to have them to keep up to date.

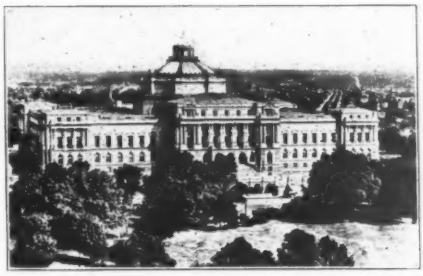
The many other interesting things included an emergency lighting unit for use in operating rooms when something goes wrong with the power circuit—a grave calamity at times! A storage battery, neatly mounted on the base, operates a powerful French lamp with prisms and a reflector. This may be used as a portable unit in private rooms and where electric current is not available, as well as for emergency purposes.

A miniature adding machine for counting blood corpuscles will probably soon appear in the larger laboratories, though still rather expensive for general use. A suturing instrument with a needle threader, suture reservoir and stitch scissors combined was reasonably priced and appeared practical and useful.

Portable or semiportable electrocardiographs are now being shown by several firms and should aid in extending the use of this valuable procedure. One is completely portable and can be carried to the patient's home in an automobile.

A complicated and fascinating apparatus for performing all known operations included in the process of refracting eyes for the fitting of spectacles (the "photophor") seems simple and certain in operation and costs no more than a really good trial case, while rivaling it in a number of respects.

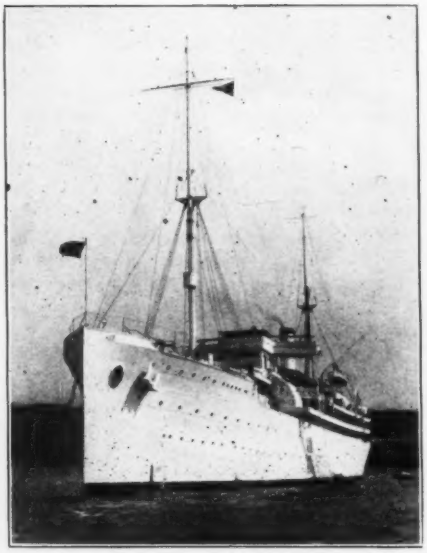
Two types of audiometer, for testing the hearing of individuals and of groups (as of school children), seem to offer a means for direct, objective recording of the degree of auditory acuity. The latter apparatus should simplify, expedite and clarify the study of hearing defects in our schools.



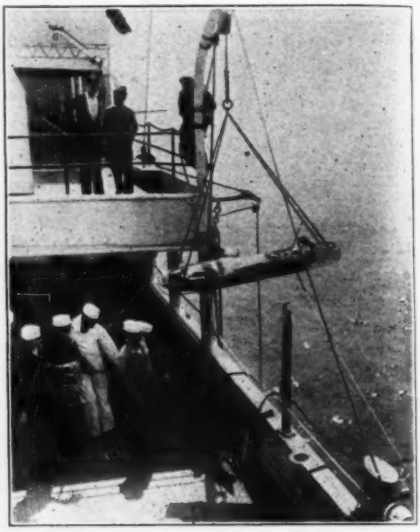
The Library of Congress.

Gas anesthesia apparatus is being made more and more nearly fool-proof and looks more and more complicated now that the machines must carry tanks of ethylene and carbon dioxide, in addition to the older oxygen and nitrous oxide.

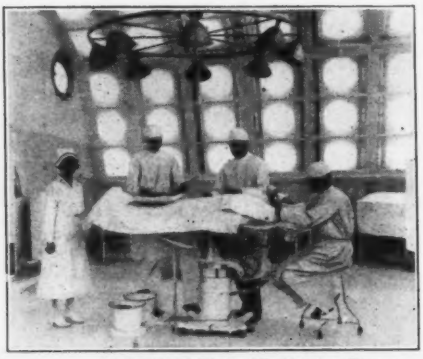
Stainless steel and chromium plating for surgical instruments is being more and



U. S. S. "Relief", Hospital Ship, U. S. Navy.



Hoisting a Casualty Aboard.



Wide World Photo, Washington Bureau
Operating Room.

Wide World Photo, Washington Bureau
Dental Clinic.

© Underwood & Underwood
A Typical Ward—U. S. S. "Relief".

Wide World Photo, Washington Bureau
A Ward on a Hospital Ship.

Wide World Photo, Washington Bureau
X-Ray Equipment.

more emphasized; while various types of ingenious, ready-to-wear metallic splints bid fair to crowd out the old, familiar soapbox wood for the immobilization of fractures, even in remote rural districts.

Among the new drugs, ephedrine easily excited the greatest interest. Many meritorious preparations of cod-liver oil were shown, attesting the increasing interest in and use of this substance. Poison ivy extract, for the treatment of cases of rhus poisoning, and the nonabsorbable laxative isacen, were among the newer showings. The powerful mercurial antiseptic and germicide, metaphen, was much talked of, as well as the increasing importance of bismuth as an anti-syphilitic remedy.

The Scientific Exhibit

This year the scientific exhibit seemed to be more practical than heretofore. Of course, there were the usual large and elaborate setups from the great hospitals and clinics, illustrating anatomy and pathology, to the profit of all beholders. But there were more of the smaller booths showing ordinary doctors how to *do* things.

Gonorrhea came in for a good deal of practical and much-needed consideration. The Wassermann Laboratory of 2159 Madison St., Chicago, showed a very simple, practical and reliable test for syphilis and will send full details to those who ask. Special exhibits on immunology, vaccination and the treatment of fractures were features.

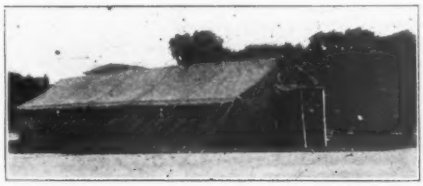
The gold medal went to Drs. Hartman, Bolliger and Doub, of the Henry Ford Hospital, Detroit, for an exhibit of the heart and kidney lesions caused by deep x-rays. Silver medals were awarded to Dr. Chevalier Jackson, of Philadelphia, for an exhibit showing household accidents to children and how to prevent them (very instructive) and to Dr. Hideyo Noguchi, of the Rockefeller Institute, New York, for his studies of Oroya fever, verugga peruana and trachoma, of which latter disease he seems to have discovered the causative organism.

Moving Picture Shows

The movie theater is now a regular feature of the Association meetings and much valuable material is here presented. As well as actual moving pictures, lantern-slide demonstrations and other practical matters are included.

Movies showing the results of obesity, the use of antitoxin in diphtheria, the health work of the bureau of mines, the valves of the heart in action, peristalsis and a number of other subjects proved very helpful; while many other brief lectures were well illustrated with lantern slides.

One remarkable feature was a demonstration of the new electric stethoscope, devised by the Research Laboratories of the American Telephone and Telegraph Co. This apparatus is said to magnify sounds 100 million times, and when it was set up and the receiving bell applied to the hearts of a number of patients on the stage, the sounds could be heard by everyone in the amphitheater (it seated 2000 or more people, I should say), like the rumblings of distant thunder. Abnormalities in the sounds could readily be distinguished. The importance of such an instrument in clinical teaching cannot readily be overestimated.



Experimental Tent for Evacuation Hospitals.

Army and Navy

The Army exhibit consisted of a complete field-hospital which was set up on the Mall, near the Washington Monument. Here was shown all the equipment of a mobile, military hospital, as actually used in the field, as well as the new Army medical equipment and the interesting experimental work which is being done at the Medical Field Service School, at Carlisle Barracks, Pa.

Interior of Surgical Tent, Field Hospital.

As its contribution, the Navy had the hospital ship "Relief" brought around to the Washington Navy Yard for inspection by the visiting physicians. Here was presented the interesting combination of a completely self-contained village of about 300 adult persons (the permanent personnel of the ship) with a modern and elaborately equipped, 350-bed hospital. The character and completeness of the appointments are suggested by the accompanying illustrations.

Section Meetings

The section meetings were well attended and many important matters were discussed.

The section on Neurology and Psychiatry devoted one entire session to the discussion of the psychoneuroses, and the section on Practice of Medicine spent one whole morning discussing the emotional and psychic factors in various disease states. This shows the interest which is developing in a line of study which has, hitherto, received too little attention, and the importance which is being attached to the psychic condition of patients. It was good stuff!

Transportation Park of Field Hospital.

In the section on Dermatology and Syphilology, Dr. John H. Stokes, of Philadelphia, presented the significant results of two years' study of bismuth arsphenamine sulphonate, a new antisyphilitic remedy of great promise; while Whitehouse and Bechet, of New York, discussed the use of gold-sodium-thiosulphate in the treatment of lupus erythematosus. Their results were encouraging.

The volume of material presented and the distances between the meeting places of the various sections made even a reasonably complete resumé of the work done physically impossible. Abstracts of some of the papers presented will appear in this journal shortly.

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Past and Present Presidents of the A.M.A.
Dr. Wendell Phillips (left) and
Dr. Jabez N. Jackson (right).

Business Meetings, Etc.

The house of delegates transacted the usual amount of business, some of the most notable discussions being in regard to the unwarrantable interference with the prescribing of alcohol, under the Volstead law, and the advisability of placing the manufacture of cosmetics under federal control, to prevent the use of poisonous or deleterious substances in these preparations.

The new President-Elect is Dr. William S. Thayer, a prominent consultant and teacher of internal medicine, of Baltimore, Md. Dr. Charles A. Elliott, of Chicago, was chosen Vice-President. The meeting next year will be held at Minneapolis, Minn.

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Demonstrating the Electric Stethoscope.

The scientific sessions and exhibits at the meetings of the American Medical Association are of the highest educational and professional value—it is a postgraduate course in what is going on in the world of medicine.

But of almost or quite equal importance is the inspiration of mingling and exchanging views with our fellows from all over the country and from foreign lands, of visiting new scenes and of getting a fresh perspective upon our work and surroundings and setting ourselves new ideals of accomplishment.

Those who miss these meetings are overlooking potent aids toward professional and social progress and personal and financial success.

Treatment of Cosmetic Blemishes

By J. LEWIS WEBB, M.D., Chicago
Attending Dermatologist, American Hospital, Seufert Memorial Clinic, Chicago Policlinic, Etc.

MANY patients have small cosmetic blemishes that might better be removed. These lesions include papillomas, xanthoma planum, warts, moles, telangectiases and misplaced stiff hairs.

There is sound biologic foundation for the instinctive aversion against skin defects and lesions that denote abnormality. It is wrong to encourage indifference toward this instinctive attitude. At some time practically every one reaches a state of mind when he appeals to some physician to remove such blemishes. It is only because these patients are denied treatment or encouraged to repress their normal feelings, and perhaps laughed at, that they come to a state of indifference toward them.

These blemishes are given least consideration by those in the least refined strata of society. They brand an individual as lacking in a proper sense of refinement, and this alone is sufficient reason for their removal if no other good reasons existed. Indifference toward these defects is a breach in refinement on the same plane as indifference toward dirty hands, dirty face, unkept nails, a lack of sensitiveness to the odor of an unbathed body, stained teeth, bad breath and several other matters which are not necessarily fatal but are intolerable to those who are refined.

Physicians have usually adopted an attitude that indicates a reluctance or an inability to treat these blemishes. Part of this reluctance arises from the fact that they are not well versed in a satisfactory technic. A technic should be developed and such lesions removed. A minor scar indicates a higher state of refinement than do unsightly lesions.

Physicians often neglect this matter of developing technic and eventually some one outside of our profession realizes the possibilities. Then we find our proper work taken from us and we complain of the loss of practice, while some other groups build their prosperity solely upon technic. Dentistry, chiropody, ophthalmology, radiotherapy and cosmetic surgery are largely technical professions.

General medicine has lost much by the lay development of infant welfare, sanatorium treatment for tuberculosis and periodic health examinations, and today we are witnessing the development of a group that routinely administers antisyphilitic treatment. These groups of nonmedical technicians take over the work as soon as the medical profession develops it to a standard and routine procedure and the physician finds himself left with only the unsolved and usually unsatisfactory problems of treating ill people. We do not believe that any other group would stand quietly by and surrender profitable and satisfactory portions of their work to intruders.

Requirements of Technic

A satisfactory technic for the destruction of these lesions must be instantly applicable, so that there need be little time lost in preparation after the patient has reached the office; it should be made painless by anesthetics that do not incapacitate the patient from going and coming; it must be, by preference, an office treatment, so that the cost and convenience are appealing features; it must necessitate but a limited demand for an aseptic technic which is too exacting to be maintained in an office and with ambulant patients; it must leave a minimum of scarring. The cost should be low and fairly standard so that it can be afforded by everyone and can be paid for from any small financial surplus.

Each of the lesions included in this group may be treated by destruction. We will therefore consider briefly the agents available, which are: Ligation, chemical caustics, actual cautery, electrocoagulation, the dental burr, electrolysis, the Kromayer lamp, excision, chemical irritants, fulguration, x-ray, radium, carbon dioxide snow, and inflammatory reaction.

Each of these agents possesses characteristics that make it especially appropriate under certain conditions. None of them is universally applicable, though one might reach such a conclusion from hearing those who offer some particular appliance for sale. Just as an artist must know his brushes and tints to produce satisfactory pictures, the physician must know his armamentarium.

Equipment

The physician who wishes to undertake this branch of office practice should equip himself with an outfit that contributes to his efficiency and gives him grounds for a feeling of confidence that he is able to do satisfactory work. Apparatus that is sometimes useful includes:

A suitable operating table and stool.
A local field light.
A hypodermic anesthetic outfit.
A carbon dioxide anesthetic outfit.
A cabinet conveniently arranged for instruments.
A working side table.
A sterilizer of small size.
Dressing materials.
Acids; nitric, lactic, trichloracetic.
Glass rods.
Scalpels, scissors, curettes, dressing forceps, needle forceps.
Suture material.
Alcohol, antiseptics, etc.
A dental motor and burrs.
A Kromayer lamp.
A carbon dioxide snow outfit.
A diathermy machine and electrodes.
A galvanic apparatus.
A cautery.
X-ray apparatus.
Radium or Radon.
Resorcin paste, chrysarobin ointment, etc.

It is not necessary to have so elaborate an outfit but the more complete equipment one has at his command the more assurance of satisfaction he will have. In this field of work it is best to be so equipped and to have your equipment so arranged that the treatment can be carried on efficiently and rapidly, just as the dentist or optometrist is always ready to begin his work whenever the patient appears.

Application of Agents

Ligation is universally available and requires a minimum of equipment and technical skill. It is suitable for small elevated lesions, especially those that are rather vascular. I favor this treatment when dealing with rather large, elevated, soft lesions, in which the base can be transfixed by a needle carrying a double thread, each strand of which is tied separately about a portion of the pedicle. If the lesion is large, it is best to pass several such double ligatures rather than to undertake to include too great an amount of tissue within any one.

This is not the method of choice in smaller, nonvascular lesions that are difficult to compress. In these it often fails to shut off the circulation sufficiently and must later be replaced by another method, which annoys both physician and patient. When used on lesions not well elevated, by using forceps to pull them out when the ligature is applied, it increases the area of the scar and causes a considerable amount of pain.

Excision is applicable to elevated lesions, especially those that are only ordinarily vascular. It may be combined with ligation when treating the type of lesion described in the preceding paragraph. I often follow excision by searing the stump with the actual cautery, because this insures sterilization of the wound, prevents hemorrhage and greatly reduces the bulk of the dressing it is necessary to apply. The small scalpels, tissue forceps and scissors used in eye surgery are convenient for this type of work.

The excision of a lesion that covers a considerable area may well be followed by

skin grafting or a minor plastic operation to cover the denuded area. This adds but little to the time or technic and it does give a more satisfactory result.

Chemical caustics, in our outfit, are limited to nitric, lactic and trichloracetic acids, applied with an appropriate sized glass rod. These formerly popular agents have been largely replaced by other methods. I, however, still prefer trichloracetic acid, applied lightly on several occasions, for treating xanthoma planum, because it causes less edema following its application than do most agents. For papillomas, warts, etc., I have adopted the actual cautery, because it can be limited more accurately to the growths. At times these agents are not used as actual cauterants, but by applying them superficially they will excite and maintain an inflammatory reaction during which it is hoped that the lesions will disappear.

Chemical Irritants include resorcin ointment or lotion, chrysarobin ointment, lotio alba and phenol. These are used to excite an inflammatory reaction during the progress of which a chronic defect may be destroyed. They are not so much in favor as they once were. The most popular agent of this group was lotio alba. This was often used for treating acne vulgaris and acne rosacea, which were supposed to be improved by the congestion and inflammation incident to its application. The results were usually disappointing.

The actual cautery has gone through many stages of evolution. It is now best exemplified by the appliance in which a metal point is heated to the desired degree of redness by the passage of the electric current. The older, heated-wire cautery was usually so frail an instrument that it was cooled almost as soon as it touched the tissues.

I find the cautery especially applicable to the stumps of lesions excised. Another field for its special adaptability is for soft, sessile lesions near the corners of the eyes or elsewhere. It is also used, instead of the acids formerly employed, for treating papillomas around the corona glandis.

Fulguration I find especially applicable to verruca planum, in adults. Children are apprehensive of the formidable appearance of the apparatus and the noise of the sparks. In well elevated lesions it is more satisfactory to grasp the base of the lesion with thin-bladed dressing forceps, which act to limit the sparkling to that portion of the lesion external to the forceps. I do not favor this method for sessile nor for very large lesions.

Electrocoagulation, sometimes called surgical diathermy, finds its particular usefulness in medium-sized, sessile lesions in which an electrode with one or several points may be applied to the area it is wished to destroy. These lesions must be thoroughly anesthetized and completely coagulated. I have not had much satisfaction from using the disc electrodes, supposed to be suitable for application to superficial lesions. These I prefer to treat with carbon dioxide snow, the Kromayer lamp or the actual cautery. Electrocoagulation requires several subsequent dressings. In my opinion this method has received too much praise.

Roentgen rays are a method of treatment especially applicable to the treatment of inflammatory and malignant lesions. It is not so useful in the treatment of the lesions we are considering as are other methods.

The dental motor and burrs I have found of considerable value in this field of work. One should have the small trephine used by bone surgeons and several sizes and types of cross-cut burrs used by dentists. This apparatus finds its particular usefulness in treating small to medium-sized, sessile lesions and those that are superficial maculae. The trephine may be used to remove the small lesions which, after being trephined, are lifted up and snipped off just sufficiently deeply to remove the skin, the small, round wound being left to granulate in. I tried using the same trephine to cut a skin graft to fill these defects, but found that the small, circular scar was more commented upon than the simple dot.

For larger superficial lesions the burr may be employed to destroy the skin as deeply as is necessary. If the surface is ragged it is readily smoothed by a few light sweeps of the curette. The denuded area may then be covered by a skin graft or it may be allowed to epithelize across, or a small plastic operation may be performed, as is best suited to the particular case.

Radium and Radon I find more useful for malignant and subacute inflammatory lesions. It has only a limited use in the treatment of the type of lesions we are here discussing.

Electrolysis is used in a variety of ways. The single needle is the most satisfactory method of destroying misplaced stiff hairs. These are a very different thing from hypertrichosis. The single needle is also the method

of choice for the destruction of telangiectases.

The multiple needle, wherein both poles are brought into alternate needle points is useful for causing the destruction of lesions in which there are many blood vessels. I employ it in treating small vascular nevi, acne rosacea, and papillomas. The lesions which are wide and extend comparatively deeply into the tissue are its especial field. I also employ the galvanic current for treating warts of the juvenile type. I have several sizes of special electrodes and find that by ionizing these growths with a 2-percent solution of magnesium sulphate, upon the positive pole, I can cause them to disappear painlessly. This is not objected to by children, and in adults, where there are many lesions and it seems likely that there will have to be several sittings, this treatment does not demand so great a degree of courage as does fulguration or caustics.

Carbon dioxide snow is a method for destroying lesions limited to the epidermis. It causes the formation of a blister through the prickle-cell layer, and scarring is almost impossible. It also finds a field of usefulness in the treatment of vascular nevi, where it is used as the means of setting up and maintaining an inflammatory reaction, leading to hypertrophy of the connective tissue and the gradual squeezing out of the vessels.

The Kromayer lamp acts similiarly to carbon dioxide snow. I have very little preference as to which agent I employ. It was hoped that these agents would be found useful for the removal of pigmented macules and the type of lesion described when discussing the dental burr, but it has not been a source of much satisfaction in this field of work.

Inflammatory reaction has already been discussed as we have outlined the uses of the several agents above. There are several ways of producing such inflammation. Probably, in the past, treatment supposedly specific, as by vaccine virus, phenol, silver nitrate, etc., was really an unconscious use of this technic.

In conclusion, this field is one that, if properly developed, pays very well. The physician equipped to treat these lesions, efficiently and upon demand, is able to add materially to his income, while he renders a service much appreciated by the patients. The fees should be moderate, the entire transaction being operated upon a basis of efficiency, painlessness, and *cash*—just as is the business of the dentist, chiropodist, optometrist and others.

1951 Irving Park Blvd.

Pathogensis and Treatment of Hay-Fever and Bronchial Asthma with Special Reference to Physical Therapy

By SOLOMON R. KAGAN, M.D., Boston, Mass.

OUR knowledge of the pathogensis and treatment of hay-fever and bronchial asthma is steadily advancing, due to constant clinical observations, experimental and research work by a number of clinicians throughout the world. I shall confine myself to a brief description of the etiology of these diseases and especial reference to a newer method of physical therapy as a valuable adjunct to other measures for their cure.

Pathogenesis

The affections commonly known as hay-fever and bronchial asthma are mostly of anaphylactic origin and are due to hypersusceptibility of the individual to various substances, usually of a protein nature.

Recent investigations have thrown considerable light upon the pathogenesis of the asthmatic attack. Many theories have been advanced from time to time by various writers relative to the mechanism of the seizures. Most important of them are the following: (1) Spasmodic contraction of the bronchial muscle (Biermer); (2) Spasm of the diaphragm (Wintrich); (3) Swelling of the bronchial mucous membrane, with increased secretion (Weber).

Morawitz[1] has considered asthma a neurotic reflex. The respiratory center, being in an abnormal condition of irritability, is more apt to receive stimuli through the peripheral nerves from the irritable mucous membrane of the respiratory tract; sometimes, however, the attacks may be of purely psychic origin.

Irritation of the vagus causes spasm of the bronchi, while irritation of the sym-

pathetic produces swelling and hypersecretion of the mucous membrane of the bronchial tubes. This theory has received the experimental support of several recent investigators. Kümel[3] has proved the role of the sympathetic in asthma. In several typical cases of bronchial asthma he made a resection of the cervical part of the sympathetic nerve and its three ganglia. The results were satisfactory. With the exception of one case the asthmatic seizures disappeared altogether during the many months of his observation.

Among other important contributory etiologic factors worth noting in hay-fever and asthma are the following:

A chronic toxic stage due to infection; disturbed metabolism; faulty elimination; an abnormal irritation of the ethmoid area of the nose (Haseltine)*; and a deficiency of the calcium content of the blood serum (Novak and Hollender)[3].

The writer is inclined to agree with the theory of LaForge[4] who says that asthma is a syndrome, or symptom-complex, which in its fully developed state presents bronchospasm as one of its symptoms. The symptoms, other than bronchospasm, which we include in the asthma syndrome are: hives, eczema, calcium or other deficiencies of the blood, protein or nonprotein hypersensitiveness, hay-fever, hyperesthetic rhinitis, obscure attacks of vomiting or diarrhea, acidemia, eosinophilia, and any of the various other symptoms which results from the so-called "allergic", or "toxic" state. These symptoms may occur singly or in various combinations, intermittently or continuously, and sooner or later is added the symptoms of bronchospasm, the patient then being denominated as "asthmatic."

Treatment

In accordance with the etiologic factors of hay-fever and bronchial asthma, the treatment is applied to meet the individual requirements of the patient. The specific treatment of these maladies is the removal of the predisposing causes by detoxication of the patient, by relieving abnormalities in the body and particularly in the nose, in the ethmoid area, and, in certain cases, by applying the Dowling method[5] of nasal tamponage, which consists of infiltrating the submucous tissue with a colloidal silver solution. A further treatment, when indicated, is pollen extract as a preventative and curative measure.

The administration of calcium salts has also been suggested as it has a sedative action on the nervous system, diminishes secretion and increases the calcium content of the blood. I have not found the effect of calcium upon asthmatics of value, either orally or intravenously, during the asthmatic attack, but is of benefit in some asthmatic cases, as a prophylactic agent, if administered for a long period of time. According to Hollender, calcium salts produce a localized action on the mucous membranes of the upper respiratory tract in hypersensitive individuals. The mucous membrane of the nose under the influence of calcium changes in color from an anemic blue, to a normal pink, after a comparatively short period of calcium administration. This change, however, is not permanent unless the calcium therapy is supplemented by other agents. Thyroid or parathyroid substances have a definite action on metabolism and aid calcium absorption and retention. The combination of thyroid extract with calcium treatment in certain cases helps to maintain the endocrine equilibrium.

Ultraviolet Ray Therapy

A valuable adjunct to drug therapy in the treatment of hay-fever and bronchial asthma is ultraviolet rays, which have been proved to have a distinct value in that relation. Hollender and Cottle[6] have reported many such cases with satisfactory results following local ultraviolet radiation in addition to the general treatment. Their technic was as follows: (1) Diathermizing of the nasal mucosa from the Oudin pole, administered to the point of tolerance; (2) Applications of the Kromayer lamp, by suitable quartz rods, to the anterior and posterior nares and pharynx, in massive doses just short of blistering; (3) General quartz lamp raying of the body. The number of treatments varies according to the clinical results. Since tonic or sedative effects are desired the long rays were advised, therefore they retained the lamp at a fixed distance from the patient throughout the course of treatment. The successive

*According to Haseltine, anything which lessens ethmoid pathology will relieve the asthmatic; anything which increases ethmoid pathology will increase his distress. This can be demonstrated best by irritating the ethmoid of a toxic asthmatic with a pledget of cotton; a bronchospasm will be produced within a few seconds, disappearing almost as quickly if the same area is cocanized. The asthmatic attack represents a bronchiolar spasm produced by a reflex arc via the fifth nerve through the nucleus ambiguus and the dorsal nucleus of the ascending vagus root. The sensory end-organ for this reflex arc is the ethmoid area of the nose. (Haseltine, B.: Bronchial Asthma. *Clinical Medicine*, 31:520. August, 1924.)

treatments were increased in intensity by increased duration of exposure and not by variations in the distance between lamp and patient.

I have applied the ultraviolet ray treatment in hay-fever and asthmatic cases with some modification of the technic. The lamp was raised one meter from the patient. The treatments were given three times weekly. The time of exposure at the first treatment was two minutes, then at each following treatment the time was increased by two minutes. At each successive treatment the distance between patient and lamp was decreased by three inches. The smallest distance reached was eighteen inches and the longest exposure was fifteen minutes. Slight changes may be made in regard to distance and time according to the individual tolerance.

Effects of the Ultraviolet Ray Therapy

The explanation of the *modus operandi* by which ultraviolet therapy is beneficial in hay-fever and asthma cases is based on theoretic suggestions as well as on definite facts established by laboratory work by a number of physical therapists.

The action of the ultraviolet rays is both direct and reflex[7]. It produces hyperemia of the skin and underlying tissue by the mechanical penetration of the light energy. This action institutes a reflex action, by way of the spinal nerves, to the sympathetic and vagus nerves controlling the respiratory organs, producing an increased activity of the nerves, which in turn is reflected in the tissues or organs controlled by them by increased activity. The ultraviolet energy reflexly also stimulates the endocrine glands and regulates metabolism.

In addition to the mechanical and reflex action, the rays become absorbed by the blood stream in the dermal capillaries and produce a chemical change in the blood whereby it acquires a greater ability to take up oxygen from the air and calcium from the food taken in by the patient. Further, by generation of heat, the ultraviolet rays produce dilatation of the blood vessels, open lymph channels and increase the osmotic processes. The result is that the pathologic tisues are drained and relieved from congestion or stasis.

The ultraviolet rays also exert a great influence upon the alkalinizing of the body by aiding the blood to elevate its saturation point for alkaline elements. These agents increase circulation and osmosis in the respiratory organs, and their governing sympathetic and vagus nerves have a sedative and desensitizing action upon them which results in a normal function when these methods are used in combinaton with other proper therapeutic measures.

Experiments have shown that ultraviolet rays cause large amounts of calcium and phosphorus to be retained in the body, and that increased amounts of these substances are found in the urine after ultraviolet radiation, indicating an increased absorption from the intestines.[8]

The experience with ultraviolet radiation in rickets, tetany and spasmophilia, on a calcium deficiency basis, has shown that the quartz rays will not only raise the calcium content of the blood but will effect a normal fixation. Quartz lamp radiation will maintain animals free from rickets, even when fed on a diet known to produce or at least incite this disease. This treatment applied in tetany has caused an increase of calcium and phosphorus in the blood and a deposition of calcium in the epiphyses of the long bones. In addition, the disappearance of such symptoms as carpal and pedal spasms, laryngospasms and convulsions, after a few exposures to these rays, has been demonstrated clinically.[9] Ultraviolet radiation also leads to an increase of lymphocytes and a production of pigment in the blood[10], with the result that toxins are rendered less active and that the bactericidal efficiency of the blood is increased[11].

The preliminary diathermizing of the nasal mucosa by the Oudin pole also exerts favorable effects. It desensitizes the mucous membrane of the nose to some degree and prepares it for more intensive penetration by the rays from the Kromayer lamp. The diathermy may also overcome reflex phenomena excited from stimulation of certain parts in the nose[12]. The hyperemia produced by the diathermy causes, to a certain extent, absorption of the inflammatory products in the tissues, promotes oxidation and increases the resistance of the nasal structures against infection.

Roentgen-Ray Treatment

Roentgen-rays assist other therapeutic agencies in the treatment of bronchial asthma. Two distinct methods have developed. The direct method consists in applying the x-rays directly to the thorax and its contained organs. The mechanism of the alleviating effect of these rays in asthma is not quite clear. It is believed

that the x-ray exerts a favorable action on the ciliated epithelium in the walls of the bronchi, on the goblet cells which secrete the mucus, and on the enlarged peribronchial and tracheobronchial lymph nodes, which are capable of causing irritation of the fibers of the vagus system. It is believed that the roentgen-ray has also a desensitizing action and that it lowers the sensibility of the nerve endings.

In the indirect method, the rays are applied to the spleen. The explanation of the effect of splenic exposures is that the x-ray initiates some sort of immunizing mechanism, acting possibly as antibodies, or perhaps, stimulating the production of such bodies.

Accorling to Gerber", many asthmatic patients may be benefited by roentgen-ray therapy. He used a combination of the direct and indirect methods, as follows: He exposed the front and back of the chest, in addition to exposing the front of the spleen, of the asthmatic. He believes that in this way the number of good results is apt to be greater than by the use of one method alone. In favorable cases he observed a lessening and even disappearance of the paroxysms and cough, a change in the amount of the sputum, and a diminution of the abnormal microscopic elements in the sputum.

There are many patients who have undergone all types of sensitization tests, vaccine treatments, and removing of pathologic conditions, and yet they suffer from asthmatic seizures. In such obstinate cases the roentgen-ray may be of use. It is also indicated in certain cases of asthma where roentgenographic examination demonstrates enlarged peribronchial lymph nodes, as x-ray treatment may produce a shrinking of these nodes and cessation of the paroxysms. Roentgen-ray therapy in bronchial asthma requires extensive experiments and clinical observation for a final judgment as to its value.

Summary and Conclusions

1.—The pathogenesis of hay-fever and bronchial asthma and the exact explanation of all the physico-chemical disturbances of the blood and tissues of the asthmatics is far from clear. Further study and research on the subject of anaphylactic phenomena are necessary. This should be checked up by experiments and clinical observations.

2.—Asthmatic seizures appear to be caused by various factors, due chiefly to infection, disturbed metabolism and faulty elimination.

3.—Experiments have shown that resection of the cervical part of the sympathetic nerve, as well as a radical operation on the pathologic ethmoid area, causes disappearance of the asthmatic attacks.

4.—Bronchospasm is not a disease, but is one symptom of asthma which is a symptom-complex, including hives, calcium deficiency, hypersensitiveness, hay-fever, hyperesthetic rhinitis and many of the various symptoms which result from the allergic state. When general toxicosis reaches a certain stage or when the ethmoid irritation becomes sufficient to incite bronchospasm the patient is termed "asthmatic."

5.—The essence of treatment of hay-fever and bronchial asthma is individualization and this cannot be provided by routine measures. The treatment in general includes the relieving of all abnormalities in the body; the removal of all sources of toxemia; the stimulation of normal physiologic action of the organs; specific immunization; the administration of proper drugs; and physical therapy.

6.—Experience in treating asthmatic patients has shown that ultraviolet-ray therapy is not a specific treatment for all cases and that it is most effective in the treatment of that disease when administered in conjunction with other medical resources.

7.—Cooperation between the internist, rhinologist and physical therapist will enhance the therapeutic results in many instances. In the past the treatment of asthma was a source of dissatisfaction to both patient and physician, but at present it is treated with a great deal of success, due to the new conception of pathogenesis and the progressive development of new methods of treatment based thereon.

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Periodic Health Examinations

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THE results of physical examination of prospective soldiers required under the operation of the selective draft during the World War astonished the medical profession as well as the public. The doctors did not expect a very high degree of physical perfection to be shown by this widespread survey of the young manhood of the nation, but even they were shocked by the very considerable percentage of those found to be totally unfit for military duty. The question naturally arose in their minds, that if the youth of America could not score better than that, what then might be presumed to be the actual physical fitness of the rest of us, regardless of age, sex or social position?

That question still remains unanswered, for it is improbable that any such a cross-section of a nation's physical and physiologic resources can ever be recorded for the population as a whole. Nevertheless, it is reasonable to suppose that there are very few indeed who could qualify as perfect specimens, sound in mind and in good physical health.

Dr. Haven Emerson, Commissioner of Health in New York City, reports on a series of 958 apparently healthy men, women and children who were examined by competent physicians at three different so-called "Health Centers" in New York. These people were of all ages and various races and either did not consider themselves ill, or, if so, did not regard their ailments as serious enough to require medical treatment.

Of of the 958 examined, twenty-four, or 2.5 percent were found to be in good health; 697 or 72.5 percent needed definite medical treatment; and 237 or 24.5 percent needed hygienic advice to correct or arrest existing errors of bodily function or defects of structure. While many of these people were undoubtedly of foreign birth and were living under more or less unhygienic conditions, yet it is improbable that more than 5 percent of native born Americans, as a class, would score 100 percent perfect in an absolutely rigid and impartial physical and mental survey, such as this one. A summary of defects found in the series of 958 to which reference has been made, includes the following:

Table 1.—Chief Diseases and Defects Needing Treatment

Diseases and Defects	Percentage of Entire Group (958) Examined
Dental defects	56
Defective vision	35
Diseased tonsils and adenoids	30
Circulatory disorders (Which included 77 instances of functional cardiac disorders and 37 of organic heart disease)	28
Diseases of women (lacerations, displacements and menstrual disturbances)	39*
Faulty posture (serious enough to cause symptoms)	10
Malnutrition (children and adults)	16
Constipation	12

Obesity, defective hearing, cervical adenitis and flat foot were recorded in about 10 percent of the cases.

Twenty-two cases of syphilis and twenty-eight of suspected tuberculosis were found.

Of the many disorders found among people apparently in good health, there are five so common that advice is frequently called for to correct them. These are *sleeplessness, constipation, overweight, underweight, and hypertension.*

Quite recently I examined a young man of 36 for life insurance. He scored about ninety-five percent perfect until I came to the estimation of his blood pressure. Much to my surprise, his systolic registered 170, and his diastolic 90. No heart lesion was demonstrable and there were no casts nor albumin in the urine. He had never had syphilis nor used alcoholics, and was a moderate eater. His habits were exemplary except in one particular. Upon close ques-

*Percentage of 433 women examined.

tioning, he admitted that he was working hard and drinking eight or ten cups of strong coffee per day; and while I am not yet certain that the coffee is the sole cause of his abnormal blood pressure, yet I am convinced that it is at least a very important factor in his case and am expecting a much lower reading after he cuts down the coffee as he has promised to do.

Another young man of 18 was found to be passing urine loaded with albumin and absolutely unaware that anything was wrong. Still another of 22 had an aortic stenosis, the result of untreated syphilis. The first case responded promptly to regulation of diet and other appropriate treatment. The other had already suffered serious and irreparable mischief but further complications can probably be prevented.

Such observations and others even more striking come within the knowledge of all of us and could be multiplied indefinitely. Many of one's clientele seem to be absolutely indifferent about their health. Their motto seems to be, "If ignorance is bliss, then 'tis folly to be wise." Yet there are a great many others who are sanely but not hysterically interested in conserving their health. The self-centered neurasthenic who plays for sympathy by exaggerating every ache or pain and over-rating the importance of every slight deviation from perfect health, needs no urge to take care of himself. As a rule, he or she does so, even to the neglect of more important duties and often at the expense of the rights and privileges of others.

So, it has seemed to me, that in respect to the preventive medicine of today, we have these three classes to consider: (1) the careless and indifferent; (2) the sane and thoughtful who want to preserve their lives as well and as long as possible; and (3) the neurasthenics who really enjoy poor health and probably would not be quite happy if they were entirely well and had nothing else about which to think and talk.

It is perhaps needless to say that the ones whom I have classified as "sane and thoughtful" appeal to us most forcefully in our efforts to conserve their health and working efficiency, yet the others should not be neglected. The needless fears and imaginary ills of the neurasthenics must be considered—but not too seriously. The careless and indifferent must be urged not to burn the candle at both ends until their health is utterly ruined.

Demand for Examinations

Whether we fancy this kind of work or not is not pertinent to discussion among general practitioners. It is being forced upon us whether we like it or not—and after all, why should we not like it? If we are still worthy to be called "guardians of the people's health," it behooves us to prepare properly for the demand and to take care of it cheerfully and thoroughly.

That there is a real demand for periodic health surveys must be admitted by us all. There are several reasons. From the broadest possible viewpoint, we may say that we are living in the age of preventive medicine. The most intelligent among the laity are much more interested in keeping us away from their homes because they do not need our services than they are in contributing to our bank accounts while sick and least able to pay. The doctor, like the undertaker, has become a necessary evil. Perhaps none of our friends would be brutal enough to express it just that way, but in practice it amounts almost to that, even if unexpressed.

Every large city newspaper has a column telling people how to keep well and, if sick, what to do. Only the more serious queries are referred to as requiring a careful examination of the patient in order to make a correct diagnosis and that the proper treatment may be prescribed. To be absolutely fair, however, I must add that practically all of them urge upon their readers the imporatnce of an annual or semi-annual health survey by their family physicians.

The Metropolitan Life Insurance Company—the largest in the world—is at present carrying on an intensive health campaign by means of full-page advertisements in newspapers and magazines with nation-wide circulation. One of their most earnest appeals is for a periodic health survey and their advertising is so widespread that it is reaching people in every part of the country and in every walk of life.

Railroad companies and other large industrial concerns require physical examination of employes prior to their entering the service. Even some of the colleges and universities are doing likewise. Only yesterday I was asked to fill out a blank certifying that I had made a careful examination of a young man who intends to study medicine and who could not gain admission to the University of Chicago without such credentials.

The Economic Aspect

These, then, are some of the reasons why people are thinking and talking about "health surveys." There are many others.

What are we going to do about it? To us, the problem presents itself not merely as a problem of public health, but it has its economic aspect as well. The socalled "preventable diseases" such as typhoid, malaria, small-pox and diphtheria, which used to be so devastating to the public yet so profitable to the profession, have almost ceased to be factors in our financial welfare. We are proud of our achievements in helping to eradicate these terrifying scourges of the human race and are even hoping that others of their ilk may soon vanish before the zeal of the only profession that works honestly, yet inconsistently, to undermine its own economic foothold in society.

If we are as wise as the serpent which graces the rod of Aesculapius, which we cherish as an emblem of the healing art, we will see in this present-day trend of preventive medicine, not only a magnificent opportunity to serve the public, but to help restore the treasury of our own depleted resources. The people seem to want such service; we have it to sell. Why not learn to do it correctly and charge them a fee commensurate with the quality of the service rendered?

It is my candid opinion that we are neglecting a rare opportunity of performing useful and profitable service if we fail to grasp the significance of this new movement which is being advertised by agencies other than our own and laid directly in front of us either for rejection or cooperation.

One item, especially, it seems to me, we should use and emphasize in our own practice, and that is to urge a complete health survey on every birthday. When we put it that way, it is impressive and not easily forgotten. The man who says he is going to have a chronic appendix removed "sometime" never does it. If he says he is going to have it done next Thursday, he usually does it. So, when a patient has had one good going over and asks me when it ought to be done again, I reply, "On your next birthday, of course." That usually pleases him and he is not very apt to forget the appointment.

I have also been tempted to have printed a little slip to post in the reception room and inclose with statements, etc., reading something like this:

"Let your doctor 'look you over' at least once a year and help keep you well. A complete physical examination on your next birthday would be a sensible and inexpensive investment in good health. Perhaps it would save you a good deal of future trouble and expense."

I am frank enough to admit that the first few complete health surveys I attempted were made rather under protest and were probably not exactly a "howling success." I realized that I had no good plan or system to follow and so could not enter into the affair with much self-confidence and enthusiasm.

Now, however, the A. M. A. has provided us with carefully prepared blanks which are easy to follow and easy to file away for future reference. They may be procured from headquarters at about a cent apiece and a supply should be in the hands of every physician. With these blanks at hand, one should be able to conduct a health survey in an orderly, effective manner. The one examined will probably be impressed with the physician's systematic attention to every detail, the examination will really be worth something and a suitable fee, honestly earned, the doctor's reward.

Finally, permit me to say that I believe in the periodic health examination. I believe it represents a fertile field that as yet is practically virgin soil. Its proper cultivation by the profession should prove to be profitable both to the public and the individual physician as well.

Common Colds

By VOLNEY S. CHENEY, M.D., Chicago
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IN all industries, absenteeism on account of sickness is a serious economic problem. In a recent report of the Boston Edison Company, covering a period of ten years, the number of days of absence per year on account of sickness was 8.9 calendar days for males and 14 days for females Among males, sickness caused 12 times as much absenteeism as accidents and the ratio for females 171 to 1. Respiratory diseases caused nearly one-half of the total number of days lost by men. The loss by women because of respiratory diseases did not reach quite the same percentage. Out of every ten men, four lost time during the year on account of "common colds". Out of every ten women, seven lost time on account of the same cause. Males lost 1.4 days per year and females 2.1 days per year because of colds. Based upon this average, the economic loss caused by "colds," in wages alone, in all the industries of the United States, is several millions of dollars; and when we also consider the losses due to decreased deficiency, decrease in production, and the extra expenditures of the invalid, the total is enormous.

There is no medical subject which has greater interest for civilized mankind than that of the common cold. I say civilized mankind purposely, for my experience of many years among the aborigines of the southwest convinces me that colds, as we know them, are a product of civilization. The layman uses the term "a cold" to cover a multitude of conditions which even the medical man does not always differentiate; viz, an acute coryza; rhinitis; pharyngitis; laryngitis; bronchitis; and sometimes tonsillitis.

Etiology

The common cold has generally been regarded as an infectious disease involving the mucous membrane, lymph glands and submucous tissue of the upper respiratory tract, but no one has been able to demonstrate that any one of the many bacteria normally inhabiting the nasal, buccal and pharyngeal cavities, is the cause of a cold, nor has it been conclusively proven that a group of bacteria is responsible for the symptoms we call "a cold". The infectious origin of a cold is only an unproven theory, and a theory based upon a false premise because, in the early stages of a cold, the secretions, from the nose particularly, are frequently sterile and the organisms usually regarded as being the causative factor are only secondary invaders of the latter stages.

Another theory as to the etiology of colds is that of a filtrable virus, as brought forth by Kruse in 1914, but this theory was also definitely demonstrated as being untenable through a series of experiments by Robertson and Graves, in 1924.

The International Medical Digest, January, 1927, says:

"Summarizing the present knowledge of the bacteriology of common colds, one must say that, as yet, there has not been found any specific organism that can be considered as the etiologic factor. The possibility of a filtrable virus as a specific cause for rhinitis is interesting but, up to the present time, the evidence is too conflicting to accept it as a fact.

"It soon becomes apparent that for a proper evolution of the causes for colds, one must go further than the study of the bacteria in the upper respiratory tract."

That is just what I have been doing in my study of colds—going beyond the study of the bacteria in the upper air passage and seeking a systemic disturbance of which the syndrome of a cold is only a local manifestation.

The accepted definition for "a common cold" has been, "an acute infection of the nasal and pharyngeal regions, or of the upper respiratory tract." There has been a dearth of research work in the etiology of colds, except for the purpose of trying to prove the theories that a cold was either a primary infection by one or a group of bacteria or due to a filtrable virus. This lack of research work must be due to the fact that a cold is ordinarily considered a rather trivial affair and one which does not respond readily to treatment but runs its natural course: it cannot be due to the apparent economic unimportance of a cold, for statistics show that about 45 percent of absenteeism in most of our large industries is caused by colds or their sequelae. Where it does not cause absence from work, it materially affects a person's efficiency and, in that way, effects also a great economic loss.

I have never been thoroughly satisfied that a cold was only a trivial affair and was primarily an acute infection of the upper respiratory tract. For the past eleven years, I have been making an intensive study of colds, their etiology, their course, both with and without treatment, and the after results or sequelae which follow.

"Colds" Not Infectious

The first thing that I want to oppugn is that "a cold is an acute infection." I have been able to disprove this by experiments on a number of people free from cold by trying to inoculate them with the secretions of an individual suffering from an acute cold. As infectious diseases are generally most contagious in the period of invasion or the early stages, I chose this period when the secretions were most profuse for my inoculations. In no single instance was a cold contracted.

If a cold was an acute infection, its origin or source could nearly always be definitely traced, but this is rather a hard thing to do and it is generally turned off with the remark, "I must have been exposed to an infection or a cold somewhere." It is true that a cold will frequently run through families and through offices where the clerks are closely associated, but this does not prove that a cold is spread by contact with other persons. The individuals in the home and in the office are subjected to the same unhygienic conditions of environment, and those conditions are the factors in bringing about an altered metabolism and a systemic disturbance affecting all the secretions of the body.

Influence of Climate

Climatic conditions have always been held responsible in some way for colds. Inclement weather conditions, of which the chief are severe cold, dampness, windiness, or sudden changes of temperature, are frequently considered the exciting, or at least a contributory cause of colds. The incidence of colds is greatly increased in the winter months and in cold weather generally. Many observers have tried to explain why colds should be more prevalent in cold weather, and the most generally accepted theory is the influence of cold upon the heat-governing center, through the autonomic nervous system; but that is the physiologic function of the heating-regulating center—to adapt the organism to frequently changing climatic conditions.

Climatic variations are a contributing factor only so far as they inhibit our normal activities and decrease our utilization of protein foods which are always in excess of what we normally require. We eat too much and exercise too little in cold weather. Colds are less frequent in warm weather because we eat less of high protein foods and exercise more. A lumber camp in which I spent several years, and where the men were exposed to all kinds of weather and sub-zero temperature, was particularly free from colds and respiratory diseases. I do not consider cold, per se, as an etiologic factor.

Metabolic Disturbances

The time of the greatest incidence of colds in our industry is on Mondays, and days following holidays, and also days following banquets or parties where there is an abundance of good things to eat (excess of protein). I have also noticed that colds are very prevalent in our traveling salesmen, or men who are on the road a great deal. After these trips, I have ascertained upon inquiry, that always there has been a decided change in their daily routine; there is a proneness to over-eating and sometimes over-drinking of alcoholic stimulants.

In a study of several thousand cases of colds, extending over a period of eleven years, and after 42 attempts to inoculate cold-free persons with the secretions from acute colds, I am thoroughly convinced that an acute cold, affecting the upper respiratory tract, is only a symptom of a systemic disturbance; namely, a disturbance of the alkaline balance or reserve of the organism. I have found in those people suffering from colds that the urine carries a high degree of acidity—much higher than the normal—and that there are other symptoms of a mild acidosis.

In incipient colds, and in those a little farther advanced, there is a change in the blood chemistry and, consequently, there must be a change in the tissues supplied by the blood. There is a decrease in the bicarbonates or reserve bases contained in blood plasma and the tissues, notably in that of the sodium and calcium salts. There is also a change in the activity of the thyroid gland, manifested by a decided increase in the metabolic rate. There is also a slight decrease in the sugar content of the blood

with a slight retention of nonprotein nitrogen. The secretions of the nose and throat are less alkaline than the normal, sometimes having a decidedly acid reaction to litmus paper. These things point the way to an abortive or prophylactic treatment.

Prophylaxis and Treatment

Prophylaxis is best maintained by exercise and a diet which is now in its acid-forming products, namely, proteins. If this diet is not maintained, prophylaxis can be brought about by alkaline waters or small doses of sodium bicarbonate with small doses of calcium and iodine (calcidin).

As an abortive treatment: If the disease is attacked when there is a beginning dryness in the pharynx or a slight coryza, or congestion of the mucous membrane of the nose, and alkalinization instituted by large doses of sodium bicarbonate, until the urine is alkaline to litmus paper, a "cold" can always be aborted. Along with the sodium bicarbonate, which I generally prescribe in 60-grain doses, accompanied by a large glass of hot water, every two hours for 3 doses, I give to an adult one grain of calcidin every half hour until six doses have been taken, and locally spray the nose and throat with a 1 to 5000 solution of metaphen.

Most colds begin to manifest themselves late in the afternoon or early evening and the abortive treatment is best given at this time, up to the hour of retiring. At the time of taking the treatment, the usual meal should be dispensed with, or should consist of milk and some cereal, or soup or broth. If the bowels are constipated, they should not be moved by a cathartic or laxative but the lower bowel should be relieved by a soap-suds enema. This treatment will abort all colds, if taken early, in their incipiency.

Where a cold has advanced to the stage where there is hoarseness and a profuse coryza, or where this condition has advanced to what we generally term "a cold", I use the following treatment: 30 grains of sodium bicarbonate and 1 grain of calcidin every 2 hours for six doses; then 20 grains of sodium bicarbonate with 1 grain of calcidin every three hours during the waking period until the cold is checked. Locally, spray the nose and throat with a 1 to 5000 solution of metaphen morning and night. If the bowels are constipated, I prescribe no laxative or cathartic but use an enema of soap-suds to relieve the lower bowel.

Conclusions

Colds are due to a disturbance of the alkaline reserve or balance.

They are not infectious as we generally consider a disease to be infectious.

Conditions capable of producing a mild acidosis are the contributing factors in producing a cold: High protein diet, lack of exercise, infections anywhere in the body.

Colds can be aborted by administering sodium bicarbonate in doses large enough to thoroughly alkalinize the system, together with small doses of calcidin.

Colds can be cured by the administration of the same drugs in small, frequently repeated doses.

Surgical Seminar

Conducted by GUSTAVUS M. BLECH, M.D.

(Note: The Seminar is devoted entirely to the practical interests of surgeons. Problems and their discussions are solicited. Contributors must give their names, but whenever desired these will not be published. Questions for this department should not exceed fifty words. Address all communications for the Seminar to Dr. G. M. Blech, 108 North State Street, Chicago.)

Surgical Diagnosis (Continued)

Endoscopy. By Endoscopy is meant the inspection of the interior of cavities (and canals) for which special tubular instruments, with or without an optical apparatus, are necessary.

Certain parts of the human body which may be classified among the cavities but which, by virtue of their size and accessibility are easily inspected by merely pushing aside or holding apart the walls which obstruct the view, require only very simple instruments, known as specula. This applies to the nose, throat (for which any appliance to depress the tongue suffices), vagina and rectum. With these we are not concerned at this time.

Endoscopy is needed to examine the esophagus, the stomach, the urethra, the urinary bladder and the sigmoid. Lately endoscopy of the trachea and bronchi has been practiced with great success. The only deeply situated organ which requires a mirror-apparatus is the larynx.

Before taking up each cavity it is well to state that the writer is well aware that most methods of endoscopy require specialistic training, not only with reference to the manipulation of the various instruments, but also for the interpretation of the lesions. When it is taken into consideration that on cystoscopy alone large volumes and atlases have been published, it cannot be expected that endoscopy can be discussed exhaustively in a brief serial such as this. Nevertheless, it is believed that every conscientious surgeon should know something of the diagnostic value of each method and should strive to acquire the necessary technic and knowledge to use at least those which must be frequently resorted to. How this knowledge can be acquired is a matter of interest, and while this would take us beyond our frame we remind the ambitious reader that where there is a will there is a way.

Esophagoscopy. The instrument for inspection of the esophagus is a tubular appliance varying in length and thickness, provided with a small electric light carrier to insure direct illumination of the area to be examined. The esophagoscope permits inspection down to the cardia.

The technic of esophagoscopy presupposes a previous exploration of the lesion by a soft rubber tube (best a stomach tube), which enables the examiner to determine the depth of the lesion or obstruction, and cocainization of the pharynx and entrance of the esophagus.

The patient must lie prone on the examining table with his head over the margin of the table so that it can be extended downward until the oral cavity and the esophagus are in one axis. Coat, vest collar and tie had best be removed before beginning the examination. A colleague, nurse or intelligent person must be present to support the patient's head. It goes without saying that all false and removable teeth or dentures must be removed. The stomach, too, should be empty as the instrument is cleansed of vomited matter only with some difficulty, hampering the examination even in the hands of experts.

The instrument is provided with an obturator but must nevertheless be introduced with extreme gentleness. Any lubricant of a fatty character is entirely satisfactory.

While introducing the instrument the examiner may encounter a spasm of the inferior constrictor of the pharynx, which naturally obstructs the normally narrow introitus. In such a case there is but one thing to do and that is to wait until the spasm ceases. Forceful pushing is a serious technical error. Often the patient begins to struggle against the examination and then it is best to remove the instrument and begin all over again a little later.

As soon as the esophagoscope has passed along the posterior pharyngeal wall at the height of the cricoid cartilage, the instrument glides downwards when it is being twisted. Now the obturator is removed, the

light turned on and the esophagus can be inspected gradually, even before the tube touches the inspected place. Occasionally it is necessary to distend the esophageal wall. This is accomplished by inflating with air by means of a double bulb and rubber tube attached to the instrument, identical with the appliance used with the better class of atomizers for self treatment.

Mucus very often interferes with the examination. This is wiped away by long, slender applicators to which small pieces of clean cotton are firmly attached.

With gentle manipulation even an ulcerated carcinoma can be seen without injuring the growth.

The study of the esophagus with the esophagoscope presupposes familiarity with its anatomy. Beginners are apt to mistake the normal width in the upper esophagus as a stenosis and the wider normal diameter of the lower esophagus as a diverticulum. Mistakes have been made by beginners in assuming that the presenting stomach, with its rather bluish hue as compared with that of the esophagus, means stasis or inflammation. The examiner must further be able to differentiate between spasm, which disappears on deep inspiration, and stenosis which does not disappear. Finally, the esophagus often refuses to remain quiet, for it not only participates in the respiratory movements, but has peristaltic waves when the patient makes swallowing movements, chokes or becomes nauseated. All this makes esophagoscopy a rather complicated procedure, but we have here to deal with art—and art is always difficult, especially at first.

Esophagoscopy is decidedly contraindicated in the presence of serious affections of the heart or aorta, in pulmonary tuberculosis and in emphysema of the lungs. Certain writers have mentioned pronounced cirrhosis of the liver as a decided contraindication. In my opinion this last contraindication is only a relative one. Retropharyngeal infections and disease of the spinal column are obviously contraindications.

The question arises, of what practical use esophagoscopy can possibly be to the general surgeon, especially to one who knows how to manipulate esophageal sounds, makes use of the x-rays and otherwise pays strict attention to the clinical history, all of which should aid in the establishment of an approximately correct diagnosis.

The answer is not difficult.

Esophagoscopy has four principal indications, which, in the order of their diagnostic importance, are:

1.—Stenoses.

2.—Dilatations.

3.—Inflammatory and Ulcerative Affections.

4.—Foreign Bodies.

It will be interesting to glance at each group separately, and compare the value and advantages of esophagoscopy over the routine methods in the several subgroupings.

This will be done in our next issue.

(To be continued)

Discussion of Problem No. 5

Recapitulation (See May issue, p. 376). This problem which was presented by Dr. M. O. Robertson, Bedford, Ind. concerns a woman, aged 63, who gives a vague history of "rheumatism" for many years without any evidence of an arthritis either now or in the past. Up to a year ago she was able to look after her household duties. At that time she began to have metrorrhagia. A physician diagnosed some uterine tumor and stopped the uterine bleeding by medication. Three weeks ago the patient, who claims never to have been pregnant, began to complain of abdominal pain, nausea and vomiting.

At that time the pulse was 110, temperature 99.8° F. respiration 22. Inspection of the abdomen revealed decided enlargement in the right lower quadrant, and while the mass simulated an ovarian cyst the growth was rather hard to the feel. The mass which appeared to be about the size of a man's head was immovable. The cervix was obliterated. Physical examination caused the patient to complain of pain.

This mass was reported to have ruptured externally about five weeks after the examination. When the patient was seen again, two weeks after this reported event, there actually was seen an opening about three inches in length, in the right groin. The patient was then delirious with a pulse of 98 and a temperature of 104° F. There appeared to be peritonitis and involuntary bowel movements. Death occurred a week later. The requirement called for a free discussion of the probable diagnosis.

Discussion by Colonel George B. Lake, Chicago, Ill.

This is a problem in professional incompetence and neglect in which the diagnosis

must be largely guess work, because the data are too limited for anything else.

Unlike acute, infectious arthritis "rheumatism" is not a disease entity, and any physician who, at this advanced stage of medical science, makes such a diagnosis and lets it go at that, is simply playing into the hands of medical pretenders and charlatans.

The physician who gave the woman of this problem pills and potions to control her uterine hemorrhage, without first finding out *exactly* what caused it, is scarcely worth the name.

One wonders why the nature of the tumor was not definitely determined by laparotomy, if necessary — before Dr. Robertson saw her, for at that time, knowing Dr. Robertson to be a conscientious surgeon, we assume that her condition doubtless forbade surgical intervention, which appeared to be indicated at the very beginning of the trouble.

The rather fragmentary history presents to us a picture of a woman of (then) 50 who apparently suffered a sudden cessation of menstruation, accompanied by a continued fever which was followed by symptoms of toxemia through fifteen years. It is not stated whether a tumor was then present. A year ago something *broke through* and the absence of offensive odor when examined speaks against the probability of carcinoma. Finally the tumor opened externally, discharged "foul material"—character not stated—and the patient died with symptoms of profound toxemia or sepsis.

The only diagnosis that appears to fit these data is an *ectopic pregnancy, with death and encystment of the fetus some months before term.* The opening of the fetal sac into the uterus or vagina, a year ago, permitted the entrance of infection, transforming the sac into an abscess cavity, absorption from which so sapped the patient's vitality that when it opened spontaneously—mutely showing wherein the men who attended her had failed in their duty—she had no strength to rally and to ward off a general peritonitis.

Comment on the treatment, or rather lack of it, seems superfluous. We cannot call ourselves a scientific profession while any considerable number of us continue to let patients drag out disastrous years of invalidism without *knowing* the character of the underlying cause and without resorting to rational methods of treatment.

Discussion by Gen. Geo. Acheson, St. Martins, N. B. Canada

Post-climacteric hemorrhage generally indicates a serious condition, and in the great majority of cases is a symptom of carcinoma of some part of the genital tract.

Careful examination, which should always be insisted upon, will probably disclose the cause of the bleeding. This may arise from an epithelioma of the vulva or vaginal wall, a carcinoma of the cervix or corpus uteri, a mucous or fibroid polypus, a fibro-myoma of the uterus, or an ovarian cyst which has become malignant.

In the case presented the data supplied are hardly sufficient to make the diagnosis evident. The first physician called was presumably correct in his diagnosis of a uterine tumor, and his treatment, whatever it was, arrested the bleeding—a result suggesting the existence of a fibroid.

Dr. Robertson's examination disclosed an abdomino-pelvic tumor, the size, induration and fixation of which point rather to a fibro-myoma of the uterus than to an ovarian cyst.

The subsequent history suggests a possibly malignant degeneration of the tumour, local peritonitis with adhesion to the abdominal wall, abscess formation, breaking down of the abdominal wall, and rupture of the abscess in the right groin.

Discussion by Dr. Robert S. Gregg, Chicago, Ill.

The history of flooding of a woman at the age of 62 suggests a possible malignancy of the uterine adnexa, and the subsequent cessation of the bleeding may be due to occlusion of the cervix, a hint being given in the problem by the statement that the cervix was obliterated.

The chronicity of the symptoms and the rather meager description of the pelvic findings throw very little light upon this case, and the only thing for us to do is to consider it from an acute angle, but even before doing so I am tempted to express the opinion that this patient was suffering from malignancy of the uterus and adnexa.

I am inclined to accept that the patient suffered from a septic appendix with an extension of the infection to the abdominal parietes, localizing itself especially in the right iliac region and producing an abscess of the abdominal wall, which later ruptured externally and internally, resulting in diffuse septic peritonitis and death.

Editorial Comment

I regret that absence from town has prevented me from submitting the above three discussions to Dr. Robertson by mail, in order to obtain an expression from him in time for publication in this issue. However I ask Dr. Robertson to close the discussion in any manner he sees fit and to send it to me in time for publication in the next issue, when I will be glad to comment on the discussions analytically.

Attention is invited to the virile indictment by our managing editor of the poor management of the case throughout the long period antedating Dr. Robertson's examination. I would appreciate it if Dr. Robertson could shed more light on the circumstances before I comment on this phase of the discussion.

This problem is really more interesting than appears at first blush and merits exhaustive discussion.

Problem No. 7

[NOTE: In submitting the following problem I desire to impress the reader with the fact that there is no "catch" in it. As a matter of fact, tricky problems have no place in the Seminar, which has earnest aims. I report the case as I saw it up to the time when the first consultation came to an end. Of course subsequent tests fully confirmed the tentative diagnosis.]

Let the reader assume that he is called by a colleague, a general practitioner, who is overworked and has too little time to give each case much time and thought, to see a boy, aged 12, who has suffered for over twenty-four hours with what you are told over the telephone is an acute case of appendicitis with septic intoxication.

When you arrive at the scene you learn that the past history of the patient as well as his family history is without anything worth narrating. He began to complain of nausea and drowsiness the day before and this was soon followed by frequent vomiting spells. The patient can be aroused with comparative ease and when questioned complains of pain in the "stomach."

Physical examination reveals something like this: *Facies* that of a boy in semi-stupor; *tongue* rather dry and furred, with a sickening breath; *pulse* 90, *temperature* normal; *breathing* is labored and irregular. *Chest examination* reveals nothing abnormal. The *abdomen* is tender to pressure only when the palpating finger strikes the epigastrium. The patient makes no sign of distress when the ileocecal region is palpated even deeply. The abdomen seems to be free from distention. The patient has been given a little milk yesterday, but since the attending physician has seen him he has had neither drink nor food. The physician also had an ice bag over the right flank of the abdomen, applied every other hour.

Requirement: Tentative diagnosis and means necessary to complete the examination.

Clinical Notes and Practical Suggestions

The Tongue in Diagnosis

THE old doctor, called in consultation, looks at the tongue, and the highly trained and excellent young physician smiles at his credulity and ignorance. The old doctor is right. The clinician, before the days of so many laboratory tests, learned to rely upon bed-side evidence, which was and still is invaluable. The technical young physician has been taught to depend upon the findings of the laboratory. The tongue is an unmistakable indicator of pathologic conditions and we are too much inclined to get away from its plain evidences of abnormal functioning.

In the early stage of an indeterminable fever, the experienced clinician watches with anxiety for the dryness of the tip and the borders of the tongue, and as it appears and spreads, even before the tongue becomes extremely parched and inclined to crack, he knows that the case is typhoid fever. When that kind of a tongue and the characteristic tympanitic conditions are present, together with a gradual rise of temperature, he needs no further evidence to establish a diagnosis. The Widal test is not always reliable.

Nothing can be more distinctive than the strawberry tongue of scarlet fever—the swollen papillae, the red appearance, beginning at the point and extending back. It occurs in no other condition and is a great aid in diagnosis.

The tongue in diphtheria presents no characteristic signs, unless patches of membrane appear, but this fact differentiates it from scarlet fever, for the appearance of the throat is sometimes difficult to distinguish in the two diseases.

In indeterminate infectious fevers it is sometimes very difficult to diagnose the true condition. Koplik's spots appear early in measles, and not only inside the lips but under the tongue. A patient developed measles in a school; fifteen cases occurred from the first exposure; seventy others were examined for Koplik's spots; a number were found infected, were isolated early and the epidemic was controlled. Under the tongue, the pointed red elevations with white caps were found, the same as inside the lips.

Nothing is more constant and characteristic than the syphilitic tongue—rather thick, pale, totally bare of membrane in patches, especialy the posterior portion. The "geographical tongue"—bare spots, sometimes changing location—is quite a common finding in hereditary syphilis. The Wassermann test may be negative but absence of deep reflexes and other suggestive symptoms will be found.

Acidosis, that condition of the blood that may lead to fatal results after a simple operation, is easy to recognize by the red tongue and the acid reaction to blue litmus paper, even without the alveolar air test and other clinical indications, and no wise surgeon would undertake an operation without previous alkaline medication when he sees these symptoms.

In gastric disease of various forms the tongue is likely to be pointed and red at the tip, and there may be very small ulcers under the tongue or along the borders; the appearance in chronic appendicitis is much the same.

The malarial tongue is unmistakable and readily recognized by those who have practised in malarial localities; thick, indented by the teeth, coated white—a coat that remains until the infection is controlled.

When the kidneys are diseased or under heavy strain, the tongue has a greyish cast and is larger than the normal size.

There is such a thing as a "bilious tongue"; the detoxicating work of the liver fails under the effects of severe constipation and intestinal autotoxemia, and the tongue carries a coat that varies from very white to dirty brown.

In diabetes the tongue is dry to very dry and may be fissured. In diabetic coma it will be found extremely dry and possibly tremulous, especialy if there is acetonuria.

In sprue, that rather rare tropical disease, the mucosa of the tongue, like that of the whole alimentary tract, becomes inflamed and the tongue becomes denuded, until it appears like raw beef; and there may be an eruption of herpetic character.

Not only will the teeth make dents in a tongue that is too large from any cause, but a sharp or very rough surface of a tooth or a root may cause ulceration and lead to serious consequences. A casual examination of the tongue in some simple, acute disease may lead to the discovery of grave pyorrhea that threatens life from chronic infection.

In cancer there may be a slit border, a suggestive fissure or crease, an elevation or a projection that becomes sore and forms a scab repeatedly. Before the glands become involved it is time to call a radium expert or a good surgeon. Papilloma sometimes leads to more important things.

Leucoplakia—whitish, superficial, painless ulcers—may be widely scattered over the tongue, the buccal membrane and the lip. It may be syphilitic but it is not usually so. The pathogenesis has not been worked out. Radium will relieve it. If the deep reflexes are lost it is well to consider it syphilitic and treat it accordingly.

Tumors of the tongue are various—myxoma, fibroma, papilloma, angiona, malignant disease—and may possibly be discovered on a cursory examination of the tongue in a routine examination. Lymphangioma and sublingual calculus are occasionally seen.

Chancre may occur on the tongue and is easily recognized by the experienced physician. In Vincent's angina, which is growing more common, the eruption or patches not infrequently spread over the tongue. It should be generally known that sodium perborate is a specific.

Multiple ulcers of the tongue and all the mucous membrane of the mouth, in aphtha in children, can scarcely be mistaken for anything else, particularly if there is pigmentation, suggesting adrenal difficulties.

The intense blue tongue in all conditions of grave cyanosis, is, of course, only a part of the general condition.

The cretin tongue, extremely thick and projecting between the teeth, is recognized even by the laity, but it is not generally known that minor subthyroid conditions affect the tongue in size, texture and motility. This invaluable organ of human communication is only as active as the cerebral centre that directs its motion, and may become somewhat like the skin in extreme hypothyroidism.

Angioneuroedema may cause sudden swelling of the tongue as it does of the glottis, the lips, the face and other places and may be dangerous. It is quickly relieved by hypodermic injections of epinephrin, suggesting its origin.

The protruded tongue, examined in the diagnosis of acute disease, may reveal the nervous jerk of parathyroid insufficiency, with calcium deficiency; the tremor of paralysis agitans; the inclination to one side, indicative of cerebral disease.

By all means let us all, old practitioners and expert young physicians, look at the tongue.

J. S. LANKFORD,
San Antonio, Tex.

OBESITY AND THE HEART*

The average length of human life is increasing. In 1799 it was 33 years; in 1870, 45 years; in 1917, 50 years; and in 1926, 58 years. All diseases except heart disease (including arteriosclerosis and high blood pressure) and cancer are decreasing.

Obesity and high blood pressure seriously endanger the functional integrity of the heart, and the two conditions are frequently associated.

Case 1.—Male. Weight, 309 pounds; blood pressure 225/195. Complained of dyspnea and orthopnea, with disturbed sleep.

Examination showed massive edema up to the waist; heart shadow wider than normal; aorta wide and hazy. He suffered from a myocarditis, due to no other cause than obesity.

Treatment.—Morphine (1/6 to 1/4 grain) given as needed to secure sleep and comfort; Karell diet (26 ounces of milk a day for a week, then gradually adding other foods); and *digitalis*, which is a specific for cardiac edema. No violent purging.

Result.—His weight was reduced to 192 pounds (including the loss of his edema) and his systolic blood pressure to 150. He

*Abstract of a clinical lecture by Dr. Stewart R. Roberts, of Atlanta, Ga., before the Southern Medical Association, Nov. 15, 1926.

is now healthy and active, but if his weight increases, his blood pressure also increases.

Case 2.—Male. Weight, 280 pounds; blood pressure, 180/120. Complained of insomnia. The vital capacity was reduced to one-half of normal. The myocarditis was not so severe as in Case 1, and was entirely relieved by the relief of the obesity.

The heart is "geared" to a certain body mass, and when the weight increases much beyond that point it fails.

Case 3.—Female, elderly. Weight, 200 pounds; blood pressure 210/110. (The diastolic pressure is of the utmost importance in making a prognosis in these cases.)

At 60 years of age, the cardiac reserve decreases 60 percent, due to myocardial changes. After a time, this patient's blood pressure fell, indicating myocardial failure or fatty degeneration, and there was a loss of movement of the diaphragm, which the French call the "second heart", because of its pumping action on the contents of the thorax.

Treatment.—This patient was kept in bed for 6 months, on a carefully regulated diet. When her weight was reduced to 116 pounds, she felt much better and now gets around quite comfortably. We do not keep these obese cardiac patients in bed long enough, as a rule.

We must be painstaking in our classification of cases of obesity and hypertension, remembering that there are constitutional and endocrine forms, as well as dietary obesity.

In cases of malignant hypertension, we find the left ventricle bulging, and there is no cure; but cases accompanying obesity can generally be relieved by securing a gradual, safe reduction in weight, with the patient *in bed.*

G. B. L.

INSULIN

In March, 1922. Dr. F. G. Banting, announced the discovery of insulin. It had been demonstrated that it was the islands of Langerhans—a part of the pancreas—that were mainly responsible for diabetes.

Banting began his work at the University of Toronto. Removal of the pancreas from a dog caused it to develop diabetes, and Banting spent hours studying the pancreas under the microscope. The pancreas performs two functions: (1) one part secretes digestive juices; (2) the islands stored up the subtle substance that enabled the body to energize the sugar. In another dog Banting tied the outlet from which the digestive juices escaped from the pancreas into the stomach. Although the pancreas ceased to operate without an outlet, nothing happened to the dog.

Banting then took a new-born calf and before it had had an opportunity to take food he extracted the pancreas. To a diabetic dog a few drops of the extract was administered. Blood test revealed that the sugar had vanished, and *insulin*, the cure for diabetes had been discovered.

Insulin may be separated from the tissues of many living things. The islet tissue of the cod will yield a quantity of insulin nine or ten times greater than a similar weight of animal tissue. Banting was aided by Dr. Collip, Prof. J. R. R. Macleod and Mr. Best.*

GEORGE J. SCHULZ,

Washington, D. C.

BARLOW'S DISEASE (INFANTILE SCURVY)

Twenty-one years ago an infant of eleven months with a unilateral, ecchymotic exophthalmos was seen in the outpatient ophthalmologic department of a certain eastern hospital. The malady was diagnosed as melanotic sarcoma and the infant admitted to the eye ward for enucleation of the eye. On account of the debilitated condition of the child the medical side of the hospital was asked to make an examination to determine if an anesthetic could be safely administered.

The visiting physician, one of those perspicacious old timers, needed only a cursory glance in order to diagnose the case correctly as one of Barlow's disease, or infantile scorbutus.

This case was recalled by one met recently. The child had been a very healthy infant up to eleven months old, but in the twelfth month developed great tenderness of the lower limbs, cried on the slightest movement, had vomiting, diarrhea and a bluish-purple, spongy swelling of the gums. He had been fed upon a proprietary food for twelve months without receiving any orange juice. Rickety rosary and enlarged epiphyses of the long bones were also present. A regime of fresh milk and cream mixture, orange juice and ultraviolet irradiations soon restored the child to health.

*Masters, David: The Conquest of Disease.

The disease is easily recognized by the child's irritability; the tenderness on movement of the lower limbs, simulating a rheumatic affection; possible ecchymosis of the skin or orbital hemorrhage; the condition of the gums; and the history of having been fed exclusively upon a proprietary food. Symptoms of rickets are often associated.

As in the first case outlined, a timely diagnosis may avert a tragedy.

R. STEWART MACARTHUR,
Los Angeles, Calif.

CANCER WARNINGS

The layman must be educated to the extraction of a piece of gum tissue, or of skin, or of a wart, just as he has been educated to the extraction of a tooth.

The interne and young doctor must beware of the incomplete removal of a wart or corn. Sufficient margin must be removed with the irritated spot so that, if the microscopic test shows cancer, the margin of healthy cells will be large enough.

There are only three treatments for cancer—surgery, radium (or x-rays—ED.) and the lead treatment.

Women who have borne children are susceptible to cancer of the cervix. Any man who allows his wife to have a baby without medical attention should be sued.

The preservation of the lower jaw is more important than the preservation of a limb.

Recognize the danger of the incomplete removal of apparently innocent tumors. If you leave any cells that are cancerous, it is worse than if you hadn't removed the growth, for your operation will have distributed the cells.

X-ray all teeth before extracting them for possible root abscesses. If the picture looks abnormal investigate before extracting.

JOSEPH COLT BLOODGOOD,
Johns Hopkins University,
Baltimore, Md.

PULMONARY GANGRENE DUE TO MILLER-VINCENT ORGANISM*

Certain cases of socalled abscess of the lung and pulmonary tuberculosis are actually gangrene of the lung, due to the Miller-Vincent organism. This is a true gangrene and not infarction and occurs in the socalled post-tonsillectomy pneumonia and abscess. The sputum is foul; the mortality is high; at autopsy the affected areas appear gray or green.

Study the washed sputum for diagnosis. Stain for the Miller-Vincent organism with strong carbol-fuchsin for 1 minute.

As these organisms are present in almost all mouths, at the gum line and between the teeth, it is the part of wisdom to clean up the mouth with hydrogen peroxide and arsphenamine, locally, before performing tonsillectomy.

Treatment is generally successful and consists in the intravenous administration of arsphenamine (minimum dose, 0.2 Gm. to a child and 0.4 Gm. to an adult). In grave cases, give maximal doses every other day, but if you have time it is better to proceed more slowly and carefully. Neoarsphenamine or sulpharsphenamine may be used, in proportionate doses, if, for any reason, it seems desirable to do so.

E. S. KLINE,
Cleveland, O.

*Notes from a clinical lecture at Mt. Sinai Hospital, Cleveland, O.

PROFESSIONAL COOPERATION

I read with interest Dr. Clarence King's article on "Dead Horse Business" and the editor's comment thereon in CLINICAL MEDICINE AND SURGERY for February, 1927 (p. 141), and feel that our experience in Dresden may prove interesting.

When I first arrived here I found three physicians, all of them older than I. Not wishing to antagonize them, I fell into their ways of conducting business.

In course of time, two other young physicians located here and we formed two groups—three older and three younger.

Business conditions were such that none of us made a living. Professional prices were disgraceful. Confinement cases were attended for $6.00. If the call was five miles in the country, and perhaps an all night and all day job, the price was the same, with sometimes two *extra* visits without extra pay. A four- or six-mile trip into the country, day or night, summer or winter, over mud roads, was made for $1.50. Office visits were 25 cents; house visits, in town, 50 cents, day or night, all medicines furnished. Vaccination, 25 cents, repeated if necessary, without extra charge. Surgical cases — really I am ashamed to tell the prices. Everything went on the books. Some accounts might be paid fractionally some time during the years. Generally they were never paid.

We younger men tried to raise prices, but patients refused the increase and it was impossible to interest the older physicians in the matter.

Finally, in desperation, the younger men got together and agreed to stand by each other for increased fees. It worked! After trying our moderate raise in prices and finding that we younger men were succeeding in our efforts to improve business conditions, we finally called a meeting of the younger men, inviting the doctor of a nearby town to meet with us. We canvassed the entire subject of fees, and made out and signed a schedule raising all prices all along the line; covering distance and class of cases; distinguishing between day and night calls; in fact, covering every contingency in practice. In addition we agreed to stand by each other in every way.

We have stood by this agreement ever since. Under its working, if a patient is dissatisfied with any one of us, he calls in one of the others, with the positive knowledge that the price for service will be exactly the same, it makes no difference which one of us is employed.

Result.—We consult together; exchange views together; help each other in every way, at any time, day or night, in our respective offices, in the homes of patients in town or country. Our trust and confidence in each other is absolute. We call on each other freely for help, knowing full well that no one of us will in any way undermine the other, by thought, word or deed. We have exactly the same prices for every service, and the entire community understands.

We have raised every fee. The cost of country trips is much higher for every distance, and all *night* calls have an extra fee in addition. The same rule applies to town visits. Prices for country visits are practically doubled. Office consultations are from 75 cents to a dollar or more. A day visit, in town, is $2.00 and a night visit is $3.00. An ordinary confinement case is *at least* $20.00, and instrumental cases pay an additional fee. Extra visits, after the one visit made after the confinement, are charged for, the same as any visit made to the same place. Vaccination is $1.00 for *each* operation. And we demand promptness in payment of all bills.

Result, again. More money; less work; fewer book accounts; fewer night calls; fewer calls by cases that used to call because service was practically free. Calls from those who are able to pay and won't pay are refused.

Greatest of all is the brotherly feeling that exists between us as physicians; the absolute confidence that exists; the utmost freedom in calling upon one another for any assistance needed. It seems to me that our professional association is ideal.

JAS. L. NEAVE,

Dresden, Ohio.

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[This is splendid, encouraging stuff! Why can not all physicians in every town and village in the Country, work together like these men in Dresden?

There are other benefits from such cooperation that Dr. Neave has not mentioned. The doctors become keener in their work by watching each other's methods and profiting by the successes achieved; the community is given the good example of seeing men who *might* be jealous competitors working together as helpful friends; the individual patients receive better service because they *pay* for it and pay enough to enable the doctors to live like human beings and study like scientific physicians; and everybody concerned is healthier and happier.

Truly, cooperation is the law of progress. —ED.]

THE IMPORTANCE OF DRUG THERAPY

I have been practicing medicine for a good many years, but when I began using active principles and other drugs whose action is direct and positive it changed my whole idea of the treatment and handling of my patients.

The greatest trouble with most general practitioners is that they know too little of the real value of drug therapy. This is not entirely their fault, but lies at the door of their teachers who failed to instruct them properly. The teaching of materia medica was inadequate forty years ago and is little if any better now.

In chronic cases, the psychoneuroses, developmental diseases of children, arterial hypertension, menopausal disturbances and in the management of elderly patients I see excellent results from the administration of endocrine products. I make the combinations myself, selecting them according to the special conditions to be treated.

In all my treatments I enforce a rigid and carefully selected basic diet, as in most chronic cases the fluids and tissues of the body are deficient in alkalies, showing to some extent the condition known as acidosis.

W. T. CRAWFORD,

Fowler, Calif.

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[We feel, as does Dr. Crawford that too little time is being devoted to instructing medical students how to *treat* their patients successfully. Diagnosis is of prime importance, if our therapy is to prove satisfactory, but it is not an end in itself (as so many seem to consider it). We must assist our patients to *get well* if we are to justify our professional being.

Drugs are by no means the only factors in our therapeutic efforts but they are powerful ones, and if we do not keep up to date on our materia medica, we are not doing our full duty to our patients.—ED.]

EDUCATE THE FAMILY

The failure to reach and educate the families of our patients is, to my mind, the one great defect of our present system of after-care for sanatorium patients. All of us who are working for the patient's ultimate recovery—that is, the sanatorium staff, the family physician and the local health association—should unite our efforts to see to it that before the patient goes back to his home, the members of his family are given an intelligent conception of the needs of his case so that they may cooperate in his after-care.

David R. Lyman, in *The Modern Hospital*, February, 1927.

CROUP AND CALCIDIN

In the past, a great deal of emphasis was laid upon the value of calcidin (iodized calcium) in the treatment of croup, and, to my mind, it is deplorable that the younger generation of medical men seems to be unfamiliar with the powers and virtues of this remedy in such cases. Children continue to suffer and die from this disease and ignorance of a drug which will positively and promptly relieve the symptoms seems almost criminal.

Since I have used calcidin in my practice, I have never lost a case of pseudomembranous laryngitis, nor, indeed, have I seen one which even developed alarming symptoms. If the case is seen early and properly treated, such symptoms should never arise.

In all cases of sore throat and cough, of whatever nature, I use calcidin freely from the very beginning, as I believe that many later serious developments may thus frequently be prevented. If this is done, the cases of croup will be properly treated, whereas, otherwise, the golden opportunity to stop the disease in its incipiency may frequently be lost.

In what light do you now regard calcidin as a remedy for true croup?

W. L. WARD,

Victoria, Texas.

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[We are glad to publish this clinical note from Dr. Ward as we, too, feel that, among the multitude of new remedies being offered to the profession, there is danger that the value of some of the older ones may be overlooked.

The word "croup" has been used to describe several conditions which differ markedly in their nature. Formerly it included a number of cases of laryngeal diphtheria. Every case showing "croupy" symptoms should be examined carefully and promptly. If there is any sign of a membrane, diphtheria antitoxin should be given *without delay*. If no membrane appears, a swab of the throat should be made and sent to the nearest laboratory or to the State Board of Health for culture and report. Meantime, treatment with calcidin, in *large doses*, should be started at once.

There is a form of "catarrhal croup," caused by Micrococcus catarrhalis and streptococci, and there is laryngismus stridulus. For these conditions, especially the latter, calcidin is practically specific. It should be given in doses of 1/3 to 1 grain, every 10 to 30 minutes, according to the age of the patient, with hot water, and continued until relief is experienced. Overdosage is practically impossible, so give it freely.

Most cases of croup come on at night and, if properly treated, are practically free from symptoms in the morning. If calcidin has been given energetically, together with a brisk saline laxative or an enema and, perhaps, apomorphine, lobeline, emetoid or hyoscyamine, as indicated, and the patient is no better or perhaps worse in the morning, the case is probably one of diphtheria and antitoxin had better be

given without waiting for a report on the smear, in order to be on the safe side.

We agree with Dr. Ward that calcidin should be a part of the treatment of *every* case of acute respiratory disease, including measles and influenza, as it is always helpful and never does harm. It is the most important remedy in the simpler cases and a useful adjuvant to other measures in the specific diseases and those which are more severe or chronic.

Remember, calcidin contains iodine and *lime*, both of which are of value in a wide variety of cases.

Most of our readers have had experience with this remedy and we would be pleased to see reports of cases and clinical suggestions. If you know of any good things, tell your fellow physicians what they are and how to use them to get results.—ED.]

GROUP LIFE INSURANCE

A certain insurance company has submitted to a business firm with which I am acquainted a proposition for insuring its employees under the group plan of life insurance. This is the cheapest form of such insurance obtainable. In this particular instance, the premium amounts to $8.42 per thousand. To obtain these reduced rates at least fifty persons must take policies.

I understand that many banks, trust companies, brokers and large mercantile establishments have been securing such policies for their employees for a number of years, and I see no reason why groups of physicians should not be entitled to similar privileges.

H. A. DE LORME,

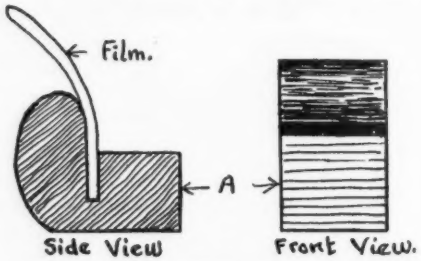
St. Louis, Mo.

[This suggestion appears to have interesting possibilities. City and county medical societies might well look into it.—ED.]

DENTAL X-RAY PICTURES

In taking x-ray pictures of the teeth the matter of retaining the film snugly and steadily in the proper place has caused a good deal of annoyance. It seems difficult to get the patients to hold them in position with their own fingers, except with considerable effort on their part and on that of the physician.

In the Pittsburgh Diagnostic Clinic, Pittsburgh, Pa., they use a little wooden block, as shown in the picture. These can be procured from the supply houses and are so inexpensive that they are discarded after use, the same as wooden tongue blade.



The films used are wrapped in metal foil, so that they can be bent and molded to conform to the structures. The edge of the film is placed in the slot and inserted inside of the teeth which, in closing, bite on the square part, marked "A," thus holding the film firmly in the desired position without the slightest effort or inconvenience.

G. B. L.

KEEP FAITH WITH YOUR CHILDREN

Parents must be particularly careful not to take advantage of the mental and physical immaturity of the child by a careless and indifferent attitude toward their promises to him. Children have keen memories for many of the petty deceptions to which parents resort in an attempt to get desirable conduct with a minimum amount of effort on their part.

If, when the time comes for a child to make his first trip to the dentist, he is told that he is going to the park to see the animals, or going to visit his aunt, or on some other outing which he would naturally anticipate with pleasure, and then finds himself in a dentist's chair, the chances are that besides the temporary pain there will be resentment, not only toward the dentist but also toward his mother, which may cause a great deal of trouble later.

The doctor, the policeman, and the dog should not be used as objects of fear by parents in order to get the desired conduct. These threats work effectively once or twice, but soon the child learns that, on the whole, doctors are kindly and friendly, policemen protect rather than punish, and dogs are good playmates. Furthermore, he learns that the parent's word can not be

depended upon. He also comes to realize that, from this method of instilling fear in other individuals, one derives a sense of power, and he uses it on his younger brother or neighborhood friends. Cheating the child in this way not only destroys the child's affection for the parent but gives him an undesirable habit to imitate.

Punishment which is constant, severe, and frequently out of all proportion to what the situation demands leads to lying as a means of protection. This fact needs no comment other than the statement that frequently the punishment itself defeats the very purpose it was meant to accomplish. Many children use lying impulsively as an instinctive way of protecting themselves from disciplinary measures, especially when the corrective measures are unjustly severe or when the child realizes that his having been honest and frank will not be considered a mitigating circumstance.

D. A. THOM,

Boston, Mass.

SKIN TESTS WITH HOUSE DUSTS

In certain cases, allergic or anaphylactic symptoms seem to be directly connected with the houses in which the patients are living; that is, their manifestations appear when they are in the house and disappear when they are absent from it for a few days.

In such cases it is often advisable to test the patient's sensitiveness to various house dusts. This can readily be done in the following manner:

Clean the dust bag of a vacuum cleaner very carefully and then pass it over the carpets for a number of minutes. Collect and label this dust; clean the bag again and collect dust from the mattress or mattresses; repeat in the same manner, making similar collections from the pillows, upholstered furniture and any other possible source of dust.

The various dust collections should be extracted for several days in a mixture of 2 parts of glycerin to 1 of Coca's fluid,* and with these extracts, scratch tests should be made on the skin in the usual way. If no result follows these tests, indicating lack of sensitiveness to the various dusts, 0.1 cc. of the extracts may be injected subcutaneously, if thought advisable, and any local or systemic reactions noted.

Valuable information in obscure cases may sometimes be obtained in this manner.

MILTON B. COHEN,

Cleveland, Ohio.

*Coca's Fluid.—2.7 Gm. sodium bicarbonate; 5 Gm. sodium chloride; 1000 cc. distilled water, containing 0.5 percent phenol.

BABY'S DAILY TIME CARD
One Year to Eighteen Months

After the first birthday has been reached and the beautiful first birthday cake enjoyed—by the parents—baby is ready for the grown-up regime of three square meals a day. Now his day goes like this:

7:00 a. m.	Wash and dress. Brush teeth.
7:30	Breakfast. Cooked cereal with milk and a little sugar; toast; coddled or soft-boiled egg; crisp bacon occasionally; boiled whole milk.
8:15	Play.
9:15	Plain cod-liver oil, then orange juice or tomato juice.
9:30	Bath.
10:00	Out of doors till dinner. Sun bath and long nap in sun.
12:00 noon	Dinner: Fresh green vegetable; baked potato; rice or plain boiled macaroni; simple pudding; boiled whole milk.
1:30	Out of doors as long as season permits, in sun except on very hot days. Short nap if needed.
3:30	Boiled whole milk. Play.
5:00	Undress for night. Wash.
5:15	Plain cod-liver oil, then orange juice or tomato juice.
5:30	Supper: Cooked cereal or rice; milk-vegetable soup or boiled whole milk; toast; stewed fruit. Brush teeth.
6:00	Bed, lights out, windows open.

Training the One Year to Eighteen Months Old Baby

Give the baby three regular meals a day. Give him a glass of milk at 3:30 p.m. unless it keeps him from eating supper. Begin to teach him to feed himself. As he learns to hold the spoon allow him to eat the last few mouthfuls without help.

Put the baby to bed at 6 o'clock to sleep all night. He should have a long nap every morning.

See that the baby has a regular bowel movement after breakfast. Regular bowel movements should become a habit.

At this age the average baby learns to walk. To help him learn to walk, a play pen is much better than a "walker," and it is useful both indoors and outdoors. During the play time the child should amuse himself. His room should be simply furnished so that he may be allowed to touch and investigate everything in reach. Always be absolutely consistent in what you let him touch or handle and in what he can do so that there will be no confusion in his mind as to what is right and wrong.

Give sun baths all the year round—in the hottest months before 11 a.m. and after 3 p.m.; in cold weather between 10 a.m. and 1 p.m.

Diet

Allow the baby 1 quart of milk a day but no more. Some of the quart may be used in cooking his food.

Give Swiss chard, kale, beet greens, celery (stewed), string beans, cauliflower, cabbage, and lettuce, as well as the spinach, carrots, peas, asparagus, and tomatoes already used.

Give an egg daily for breakfast or dinner.

Add scraped beef, broiled lamp chop or steak, roast or broiled chicken, or boiled fish to the diet by the 14th month, giving three times a week. All meats should be cut up fine.

Cooked peaches, apples, prunes, and rhubarb, slightly sweetened.

Orange, grapefruit.

Puddings cooked with milk: Rice, tapioca, cornstarch, custard, and junket.

Give 2 teaspoonfuls of plain cod-liver oil twice a day.

Give 1 tablespoonful of orange juice twice a day or 2 tablespoonfuls of tomato juice twice a day.

Offer the baby boiled water, not sweetened, at least twice a day—oftener in summer.

CHILDREN'S BUREAU,
U. S. Dept. of Labor.

THE PSYCHONEUROSES*

The physician is a student of the biology of individual human beings. Patients are those who, in some way, fail to function adequately in their environment. A common form of this inadequacy is due to faulty reactions of the personality as a whole to surrounding conditions, and these maladjustments we call the psychoneuroses.

Case.—This woman complains of pain and a sense of constriction in the chest, heart and epigastrium, tingling in the arms, weakness, insomnia, and a variety of other rather vague symptoms.

She spent a year and a half in bed, at one time (this was probably a defense reaction to life), and has had many diagnoses made by many men.

Her teeth and tonsils have been removed. Her blood pressure varies between 98/76 and 116/80. There are no anatomical abnormalities of any moment. The symptoms are out of all proportion to the physical findings, but we must be very careful to be *absolutely sure* there is no organic disease before we make a diagnosis of psychoneurosis.

In order to benefit such patients, we must restore their feeling-tone, emotional control and will. The physician must be sympathetic. It is of no use to say to such a patient, "Buck up and get hold of yourself. Act like a normal human being". These unfortunates *can not* feel and act normally; if they could, they would not be patients. They cannot, now, control themselves or their conditions. They must be *protected*, at first, by temporary isolation and careful nursing, and treated by physical therapy and other measures to restore physical integrity. Later, they must be taught to act for themselves, slowly and under understanding direction.

Many of these conditions are cyclic depression states with periods of exaltation between them. They tend to balance their feeling of inferiority by dominating others (as members of the family), by unusual submission or by noisy self-assertion.

We must dispel this feeling of inferiority and failure by putting them at some type of work where success is *assured*. Each success attained will give them more confidence to undertake harder and harder tasks. Thus they will gradually return to normal living.

G. B. L.

*Abstract of a clinical lecture by Dr. Lewellys F. Barker, of Baltimore, Md., before the Southern Medical Association, November 16, 1926.

THE ABDOMINAL BELT IN PREGNANCY

In most articles on the subject of prenatal care, nothing is said regarding the wearing of an abdominal belt, though this support appears to have a very important

influence, especially in multiparous patients, on the position and presentation of the fetus during labor.

It is routine advice in my practice that all pregnant women must wear an abdominal belt, beginning at the fifth month.

The best usually recommended is one about seven inches wide, laced behind and adjustable at the sides. It must be put on in the *recumbent* position, preferably with the hips raised on a pillow, and when the patient stands should fit snugly under the abdomen and support the weight of the fetus, the resultant feeling being one of decided comfort.

R. STEWART MACARTHUR,
Los Angeles, Cal.

THE FAMILY PHYSICIAN

"It has been my good fortune to have intimate knowledge of physicians from childhood—personalities who went by the old and fortunate name of the family physician, the man who was elder brother and counsellor, who was almost as much nurse as doctor, who cared mightily for every patient, who stopped at nothing, whose tenderness matched his skill, and whose devotion went parallel with his service. To have those contacts, to have those memories, to have those relationships is itself a liberal education. That is why I prefer, speaking as a layman and for the patient, to dwell not on the technical aspects of medicine, not on any of the new scientific discoveries and methods and possibilities, but upon that larger view which sees the modern physician as the trained man of science and public service, rich in personality, serene and secure in the feeling that others depend upon him, and holding himself for one of the very highest and most satisfying services to his kind. The very verb 'to heal' sounds like a benediction."

DR. NICHOLS MURRAY BUTLER,
In *Clin. Excerpts.*

PRESENT-DAY PROBLEMS OF SURGERY OF THE THYROID GLAND*

The author mentions a recent series of 481 cases of partial thyroidectomy for adenoma without hyperthyroidism in which death did not occur and states that the present mortality for operation in cases of exophthalmic goiter is between 2 and 4 percent. The present success is partly attributable to the less advanced stage of the disease when first seen, partly to improvement in technic, and partly to the use of Lugol's solution. In mild cases and certain of the more chronic, iodin has little effect and after the initial improvement the condition of the patient becomes stable. He refers to the histological changes in the gland and shows that operation is safer not only because of the general improvement of the patient but because the thyroid is rendered more suitable for operation.

Although the duration of preoperative preparation varies in different patients, three measures are essential for all: iodin, rest and a high-calorie diet. The amount of iodin varies and if the patient is in a crisis on admission the dosage may amount to 100 minims daily. The use of digitalis as a routine is contraindicated but the drug may be administered in exceptional circumstances.

Preoperative preparation should continue as long as the patient shows definite improvement, since it is the aim to avoid crisis or pulmonary infection after operation. If the symptons characteristic of exophthalmic goiter have disappeared or markedly decreased, crisis is not likely to follow the operation. After a crisis the patient should be allowed to regain his strength, at least partially, before operation. Improvement may be hastened by ligating both superior thyroid poles.

The author believes that there may be a certain time most favorable for partial thyroidectomy. Likewise there are conditions which render two-stage thyroidectomy preferable. If this procedure is followed, six weeks or more should elapse between operations. The operative risk in children is relatively greater and the author has often found it advisable to prolong the preparatory treatment to two or three months.

The success of the operation depends on the patient's cooperation and confidence, the nature of the anesthetic and experience of the anesthetist, and the freedom from technical complications, especially injury to the recurrent laryngeal nerve and postoperative hemorrhage.

Iodin is administered after the operation but this is not a substitute for its preoperative administration.

The author has encountered his most serious risks in cases of adenomatous goiter with hyperthyroidism. The onset of the hyperthyroidism is so insidious that viscera degeneration has often appeared by the time

*Author's abstract of a paper read before the Chicago Medical Society.

the patient seeks treatment. The course of the disease is not greatly influenced by preparatory surgical or medical measures. The hyperthyroidism is relatively mild and postoperative crises are rare.

The author believes that all nodular goiters should be removed soon after their onset. The patient should at least be under periodic medical observation so that hyperthyroidism may be detected early. He deprecates the tendency to treat adenomatous goiter expectantly. An adenomatous goiter will not disappear spontaneously. Operation is accompanied by low mortality and the chance of recurrence in patients more than thirty years of age is extremely small. On the other hand, there is always the threat of hyperthyroidism, of malignancy, and of tracheal compression by extension of the growth either behind the trachea or into the chest. Statistics show that adenomatous goiter must be considered as a predisposing cause of malignancy of the thyroid. The author is not in favor of indiscriminate operation for all adenomatous goiters. He thinks the operation is safer after thirty. In any event the patient should not neglect periodic medical examination.

JOHN DE J. PEMBERTON,
Rochester, Minn.
from *Bul. Chicago M. S.*

THERAPEUTIC VALUE OF NEOARSPHENAMINES

Today there exists a remarkable variation in the parasiticidal effects of different brands of neoarsphenamine employed in the treatment of syphilis. I have repeatedly found samples on the market unable to cure syphilis in rabbits in doses as high as 0.045 Gm. per kgm., whereas the average single curative dose should be 0.020 Gm. per kgm. of weight for these animals.

It is true that repeated doses may dissipate the obvious lesions of syphilis in human subjects and relieve some of the symptoms, but I doubt that the effects will be permanent, and I believe that a high incidence of tertiary syphilis will be observed in the next ten to twenty years among syphilitics who believe themselves cured by series of injections of some brands of neoarsphenamine being employed today in the treatment of acute syphilis. Manufacturers today are putting too much stress on the flash solubility and low toxicity of their products; more attention should be given to their curative activity.

I believe that the manufacturers should be required to determine the trypanicidal activities of at least one out of every three to five batches of neoarsphenamine produced and that the Hygienic Laboratories should check up the results at frequent intervals. I hope that physicians in general, in this country will take a greater interest in this and show the manufacturers that they are interested just as much in the question of curative activity as the physical qualities of the drug and its low toxicity.

JOHN A. KOLMER,
Philadelphia, Pa.

ETHICAL PUBLICITY

An editorial article in the *Med. Pocket Quarterly*, for March, 1927, suggests ten ways in which a physician may properly and ethically keep himself before his public. These are:

1.—Read papers before medical societies whenever possible and see that the editor of the local paper gets a layman's abstract for publication.

2.—Privately publish and distribute little pamphlets on matters of local political or social interest, containing no mention of the writer's work—only his name on the cover.

3.—Publish booklets on the care of health, prevention of disease, etc., written for laymen, with arrangements as in No. 2.

4.—Send the editor news notes of cases: "John Jones, who was severely burned last Friday, was treated by Dr. Smith by the new sprayed paraffin method and is doing nicely."

5.—Send the editor news of any new and interesting scientific apparatus, with or without pictures, and append a brief note to the effect that "Dr. Smith has just installed such an apparatus in his office."

6.—Write letters to the paper on subjects of local interest.

7.—Join public bodies whose meetings are reported in the papers (Chamber of Commerce, Rotary, civic societies, clubs and lodges) and take an active part in their work, so that your name will be mentioned.

8.—Make speeches before schools, clubs, societies and take part in all activities that are likely to be reported.

9.—Review, for the local paper, all new popular books dealing with medical subjects, to be printed in the literary section.

10.—Send to the local paper all items of a personal and social nature which are likely to be of any general interest.

Such crude methods as being "paged" at church or the theatre are to be discouraged.

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[With several of these suggestions we agree; with others not.

We have long urged that all doctors should take a more active part in the work of the medical societies, and there seems no valid reason why the local paper should not give notice of these activities.

A keen interest in all the affairs of his community is of the highest importance to every physician, as well as to other citizens, and it is a fine thing, for the doctor and for the community, if he takes an active and intelligent part in whatever is going on in the schools, clubs and other civic bodies. Such publicity as comes from constructive work for his town or his neighbors is surely proper and well earned.

Interest in political, social, literary and public health matters, which the training of the physician should especially fit him to discuss wisely, is highly commendable and should render his communications to the newspapers on these subjects of great value to all concerned. Surely, no one can object to this sort of publicity and we feel that doctors are, as a rule, insufficiently interested and active in public matters.

When it comes, however, to the question of pushing into the papers news notes of cases treated, new apparatus purchased and weddings or card parties attended by the doctor and his family, or even to the privately printed pamphlets, we may be old-fashioned, but we do not feel that these things are quite consistent with the traditional dignity and atmosphere of a learned profession and we should hesitate to recommend them. We shall be happy to hear the opinions of our readers on these points.

We do feel that physicians should take a more enthusiastic part in the activities of the profession and of their communities and that such participation would make them better men and better doctors, as well as making them known to many people in a desirable and wholly legitimate manner.

There is another angle to this publicity business, too. Cooperatve advertising of matters of universal application and general interest, pertaining to the medical profession, is gaining ground. Our friends who preach the soundness of "direct appeal" say that this advertising is no more legitimate than that done by individuals, but we feel that any thinking man should be able to detect a *fundamental* difference.

We would be glad to see every medical society in the country making an *organized* effort to acquaint people with the truth regarding the profession and its work and we feel that the more this sort of thing is done— if done wisely— the better.—Ed.]

PYURIA*

Pus in the urine is a decidedly frequent finding, and there are physicians who consider its appearance a signal for irrigating the bladder. This, however, is a useless and unwise procedure until we know where the pus comes from, and the determining of this point is frequently a rather difficult and complicated procedure.

Pyuria may result from a number of conditions besides infectious processes in the kidneys—pyonephrosis, pyelonephritis, etc. It may be due to retention of urine in diverticula of the bladder; to ureteral strictures with a resulting dilatation above the affected point; to ureteral stones; and a variety of other conditions and anatomic malformations.

The only sound and accurate method for determining the condition of the urinary organs is by performing cystography or pyelography. All of these procedures are embraced under the term *urography*, which is therefore preferable, and consist in injecting solutions of radio-opaque salts into parts or the whole of the urinary tract and then studying the structures—bladder, ureters and kidneys—by fluoroscopy or roentgenography.

Once the condition present is accurately diagnosed, treatment is frequently surprisingly simple; but without such diagnosis the physician may blunder on in the dark for months or years.

Whenever a case of cystitis does not improve under ordinary treatment within a reasonable time, it is well to make a careful search for evidences of the presence of tuberculosis.

Daniel N. Eisendrath,

Chicago, Ill.

*Abstract of a lecture delivered at the A.M.A. Meeting, Washington, D. C. May 16. 1927.

The Leisure Hour

Conducted by GEORGE H. CANDLER, M.D.

A Melody from the Marshes

A CLOUD like a sail on a wide blue sky,
A young tree growing straight and high, ...
These are all I can see from where I lie.

But here is beauty enough for me,
Enchantment is here and mystery,
In the sky and the cloud and the wind-swayed tree.

For the leaves of the poplar shake and shimmer,
And the branches are plumes that beckon and glimmer,
And gleam in the sun like wet limbs of a swimmer!

The cloud is a sail that dreams and drifts,
And floats foam-white thru the trees' green rifts,
And my heart from its sorrow to laughter lifts!

Silver Laughter Leaping Up

(To My Son)

SILVER laughter leaping up
From your childhood's wonder-cup!
Beads that burst in iridescence;
Baby soul in effervescence;
Laughter's self and Laughter's essence!
Spilling, spilling, ... spilling . . . .spilling . . . .
Heaps my own heart, foaming, filling!
Silvered, rainbowed bubbles leaping
Till in wonder I cease weeping!

—Miriam H. Krarup.

Calumet, Michigan

Pleasure Island. June: Bass!

UNFORTUNATELY, when you read this, June, 1927, will have entirely evanesced, so to speak, and such black bass as you may connect with in this year of grace will have to be taken from deep water or along shore in the earlier hours of the day—until September, then again, the aristocrat of findom will strike at the minnow, frog and spoon, around snags and tree tops as he did before. Each year, in the lakes of Michigan, Wisconsin and Minnesota, these fish grow scarcer (and smaller) and men who looked askance at the "big mouth" in some small, lilly-covered lake go after him now with great enthusiasm.

The "big-mouth" bass, early or later in the season is, of course, not to be despised anywhere, and in cold water, is, in certain localities at least, quite as game a fish as his red-eyed relative. But the black bass proper, over most of the northern territory, should be taken in late June or early September—and it is not easy any more to find enough of him to afford all of us good fishin'.

Year after year this particular piscatorialist and a few other casting cranks have sought for waters that were NOT fished out, and this spring there came such an opportunity to pin down, for a reasonable number of men, a section of the best bass fishing available in this world, that it simply *has* to be grabbed. And if *you* are interested enough in real wild woods, real bass fishing and the spending of one, two or three months each year on an island seven miles long by three wide, where none but the elect can come, drop me a line pronto, or sooner than that, say definitely that an assessment of five hundred dollars for YOUR deed in fee simple to five acres of shore property will be forthcoming on demand and you'll get in safely on Pleasure Island.

I am a little bit more than enthusiastic about this thing, because, within a very few years no such a place will be available even to the bloated bootlegger or cosmetic King. Combing the territory thoroughly, one can find but few even indifferent inland lakes which can be *controlled* and none of these even are free from undesirable features. The "good" lakes have naturally fallen into the hands of resorters and, believe me, since good roads and reasonably priced cars came into exuberant being the resorts are certainly resorted to! Nothing, of course, could be finer for everyone—except the man who likes *de luxe* fishing and a certain degree of primeval solitude. For him "Pleasure (and *Treasure*) Island" now alone offers that which he may have found once but shall soon find no more forever.

Here is the picture and those who know me will realize that the colors are not "laid on for effect". In Lake Superior, off the coast of Wisconsin, there nestles a group of islands stated even in the enclycopedias, etc., to be "among the outstanding beauty spots" of the old U. S. A. The black bass fishing about their shores and in the channels is perhaps the best that there ever was, is now or will be. And that's saying something.

The islands themselves have been generally acquired by those who knew a good thing when they see it. One or two of them are too large for private ownership and on one a reasonably-sized North Woods town exists. Indians are there—*real* Indians—and on the mainland adjoining, their reservation stretches away for miles.

Among these islands, away out and set like the topmost jewel in a diadem, is "Pleasure Island" as I have ventured to name it. No man has squatted there, for, until three or four years ago, it was, from shore to shore, an unbroken hardwood forest. It bears also some hemlock and Pine, but because the maple, birch, etc., predominated and the distance to shore was considerable, lumbermen left it alone. You cannot raft hardwood logs: and towing them in on scows costs money. Recently, however, the demand for veneer woods has made it profitable to do even this and a certain lumber company has, each season, been taking out logs over fifteen inches in diameter; nothing else is cut. This "desecration of the forest" is sad of course in theory, but practically, such thinning of the woods is highly salutary and the island will, as a result, be even more beautiful and desirable than it originally was. Most important of all, it enables someone (hopefully, US) to secure the entire terrain at a very, very reasonable figure; lumbermen do not want islands.

On one side Pleasure Island presents a wonderful contour of pine-clad, red sandstone rock to the lapping or dashing blue waters of Superior. On the other, thro'out

its entire length, there is a sloping sand beach. Here the bathing and boating is perfect: round the island the fishing and the scenery is—well, its IT and that's all that need be said. At the southern end is a natural harbor that, with a little work, will take care of all the craft that can "belong". There are no swamps, swales or marshes; there is no hay-fever; there is abundant pure water and the inner channel affords a means of reaching the mainland with any kind of sail or small motor-boat.

All this from late May till mid-October. Then Superior and the Frost King reclaim their own. Of course, in winter you *can* drive out over the ice—if you want to—and I can readily believe that some hardy souls will want to do that very thing. *I* won't. If ever I get ice-bound, I'll stay right there and burn wood (and tobacco) till the arbutus trails again. There are partridge in great abundance and deer seek sanctuary on the island—and find it. In fact the place is just seven miles of Paradise for those who love the unspoiled outdoors—and are willing to have it remain unspoiled.

The three of us who are fortunate enough to have this place under hand have this general idea in mind and if just enough of the right kind of men fall in therewith, it will be carried out:

First—modifications and refinements of plan will come later—we propose to acquire the island, permitting the further removal of certain trees during the winter months over a period of five years. Five acres (or more) of shore land will go to each member of "The Islanders." He may go there and select his own site or we will assign the blocks in rotation—East (rocky) or West (Sand) shore as may be preferred. In every case there will be, on that acreage, an ideal location for a cottage. The restrictions will be just these: Nothing pretentious or out of keeping with the natural surroundings is to be erected; nothing commercial or "run for profit"—with perhaps the exception of an Island Commissary which may prove desirable—shall be permitted. The centre of the Island, save for a woods' road thro'out its length and another across it shall be forever a natural preserve where The Islanders may roam unafraid among creatures not in fear of them.

Title to each parcel will be absolute, but the original Islander will agree not to sell within a period of twenty-five years to any individual or individuals who may not prove acceptable to the committee of management for the current term of three years. This committee will be elected by The Islanders themselves, just as soon as there are fifty of them. At that time the desirability of erecting a main lodge with accommodation for bachelors or unattached women will be considered. All these things will work themselves out naturally as the group forms but the essential thing at this precise moment is to *get the Island* before some speculating bunch can grab it. Our little trio (yes, there are just three of us now because we haven't said a word about our find till this minute) are prepared to effect the payment of the initial thousands of dollars, provided we feel reasonably sure that we can get a few of the right kind of people with us to "carry on" and maintain the Island as the one place where the fisherman's and nature lover's dreams can come true—a place

Where the Red Gods dwell and Lake sprites play
And the *hoi polloi* are ten leagues away.

There is no other Pleasure Island obtainable in this part of the world. Nature doesn't make 'em anymore either, and if we really want what we've always said we yearned for, we must go get it NOW.

As the Real Estator (beg pardon, the Realtor) says, send in your reservation and we will do the rest. Remember, please, that all we want at this time is an actual expression of interest in our plan from a very limited number of people. Having been with you for lo, these many years, I personally would like to see THE ISLANDERS made up largely of Clinical Medicine subscribers and their Lineal descendants. So, if you want to "go fishin' with," just say so. If the ayes are loud enough by Fall or next Spring, you can enter Paradise.

P. S. Yes, we have no mosquitoes.

P. P. S. What the monetary value of Pleasure Island property will be ten and twenty years from this date (if this plan carries) 'Evin alone knows, I don't, but the figures are well worth guessing over.

P. P. P. S. The small-mouthed Black Bass has his *permanent* address at this point. Drop him a line. He'll strike.

That's all. R. S. V. P.

G. H. C.

SEEING ENGLAND

This letter may prove interesting to the readers of CLINICAL MEDICINE AND SURGERY.

We were met at the dock at Liverpool by Mr. Du Bois of the Graesser-Monsanto Co., who helped us clear our baggage through the customs, went with us to the ferry and across the Mersey to Birkenhead, then on the train with us 15 miles to Chester. Some time I will give you my impressions of English trains. Enough to say now that they are very comfortable—and engine and cars are very small.

At Chester we put up at the Grovenor Hotel—a fine type of provincial hotel. The only heat in your room, from a grate; "boots" shines your shoes; no running water in rooms; no water to drink unless you ask for it.

I had hardly got settled before I had two telephone calls—No. 1 from Mr. Graessor and Mr. Du Bois, inviting us to call on them at Ruadno, in Wales, fifteen miles away; No. 2 (long distance) Spicer telling us that he would come for us with his car on Wednesday morning and drive us to London, something like 200 miles away.

The next day (Tuesday) we spent in sight-seeing, taking a car for an hour or two in the morning. In the afternoon we drove out to Ruadno, through some of the most beautiful country we have ever seen. Chester is a real medieval city. There are houses (timbered) which are hundreds of years old; old inns, like the Bear and Billet and King Edger's, which go back beyond the days of Shakespeare. There is an old city wall, 2 miles long, surrounding the city of old, dating back to the Romans.

We went through Stanley Castle—a very old, timbered house, long in the family of Lord Derby. It has secret rooms, curious old furniture—and a ghost! The afternoon we drove to Ruadno and then went to the country home of the Graessors at Overton, six or seven miles away, where we had tea. A beautiful spot, overlooking the lovely valley of the Dee; and a charming English home.

Mr. Spicer came the next morning, and then began (at 12) one of the most enjoyable auto trips we have ever had. The weather was fine all the way, and unusually warm for this season. Foliage was well advanced; fruit trees in blossom; spring flowers out; grass and hedgerows green. The roads are generally macadam, but in splendid condition; narrow from our point of view, winding back and forth. In Wales we went over mountains where the scenery was superb.

I cannot, in this short letter, tell any details of this trip. Sufficient to say that we went through three old castles, in various states of preservation: Stotesay—a small one, very old; Ludlow, much larger, now a ruin, going back seven or eight hundred years—the home of Earls and Dukes—the headquarters of the house of York during the war of the Roses; and Warwick, equally old but still in use, the seat of the Earl of Warwick. There we saw one of the finest collections of paintings—portraits mainly—still in existence in England.

We also visited several of the centuries-old cathedrals—for instance, those of Chester and Worcester—filled with historic memorials leading back into the hoary past.

We reached Gerrard's Cross (Mr. Spicer's home) on Friday. He put us up at the Chalfont Park Hotel, which is located on the grounds of the Gerrard Cross golf club. There are two courses, one of 9 and one 18 holes. We went around the 9-hole course with Mr. Spicer and his son three or four times. The setting of the grounds is certainly lovely and the fairways good, but the greens are not nearly so well cared for as they are in the average course in the United States.

The Chalfont Park Hotel is an old baronial residence, formerly the home of Sir Edgar MacKaye Edger. It was very comfortable, except for the fact that it was not heated as we like. However, we had a gas grate in our room, which helped. Meals were very good, except for a certain monotony in the menu; i.e., fish at every meal, mutton very often, potatoes always, and nearly always asparagus. Water when you asked for it—but nearly everyone in the dining room drank wine. With few exceptions (and we made up a good share of these, having sent heavy luggage to London), the guests "dressed" for dinner. Prices are quite moderate. We were (I think) the only American guests. Our English friends (I fear) did not wholly approve of us, for they didn't warm up much.

Mr. Spicer was and is kindness and courtesy. He certainly has done everything possible to show us the real England. During the next two days he took us to many places of intense interest—for instance, Stoke Poges Church where the Poet Gray is buried, and where, under the thousand-

year-old yew tree, in this quiet churchyard, he wrote "The Elegy." This, too, was the memorial church of the family of William Penn. They are burried within the old church, but the founder of Pennsylvania lies in an obscure grave-yard adjoining an old Quaker meeting house, six miles away.

I would like to tell you of our visit to Oxford and its Magdalen (pronounced Mal-den) College, and of Eton College. The beams in its oldest school-room were taken from Spanish ships of the Armada. An old attendant, whose nickname is "Fusee" and who has been in the school since 1884, showed us around. Curious were the thousands of names of old boys carved on panels, walls, doors, everywhere in the school rooms. Fusee showed us the "birch" —bundles of them—with which the bad boys (stripped to the skin) are whipped by a master. One of his duties is to hold the kneeling boy while the birch is vigorously applied—and the son of a duke gets his like the rest.

For two days we have been in London. I find much of interest for our party and much that is interesting in a business way, although I am yet on the fringe of things. Perhaps you would like our impressions. Our first feeling is that England is a very rich country, with enormous fundamental resources. It is true we have not seen much of the very poor; but where we have been, people must have money to spend—and are spending it. Prices of most things are as high as in America. Food is just as expensive—perhaps more so. Hotel and restaurant prices are about the same as with us, and nearly everything you see in the shops is as high as with us. Woolen goods are cheaper; cotton goods higher; hats and shoes higher; drugs, in the main, just as high.

British doctors are very conservative. They trust Englishmen, but they "have their doubts" about foreigners. There is great interest in ephedrine here, but practically none of the drug.

Mr. West is in London—had been here to see me before I arrived. I took luncheon with him at the Constitutional Club today. I shall not tell you whether I drank water or not—but it may interest some of you to know that *he* ordered sherry of 1913, port of 1912, and brandy of *1830*. We shall go to Sheffield the last of the week and spend two days.

DR. ALFRED S. BURDICK.

A COLD

A cold is not a cold to me—
It's Nature's way to tell
That I've been dining recently,
Not wisely, but, too well.

A snuffly nose has come to mean
That I've enjoyed, erstwhile,
Some breaded pork chops, nestled deep
In sweet spuds, "Southern Style."

And when I puff germ-laden coughs
At "L" trains full of boobs,
I know it's lobster, broiled alive,
That fouls my bronchial tubes!

Or else, perchance, a wondrous steak
With onions crisp and brown
Has made my liver make of me
A menace to the town.

Or it might be a chunk of cheese
Or mince pie, hot and sweet,
So, a cold is not a cold to me—
It's just—too much to eat!

EMMA TOLMAN EAST.

Chicago.

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"JUST A PRAYER AT TWILIGHT"

Time and again, the highbrow friends of Mr. and Mrs. Brown had been beseiged with stories of little Annie's and Tommy's astounding qualities. They were devoted to their parents, if ever children were, and not an evening passed that they didn't send down from the top of the stairs their good-night message of love to the folks below.

Came bridge night and the aforementioned h.b. friends. As the game was going strong, and silence reigned supreme, little Annie's voice floated musically down from the nursery.

"Mother!"

"Hush!" said her doting mamma, lifting an admonishing finger, "Now comes the tender message that means—oh—so much to us."

Then her voice took on a new note of tenderness. "What is it, darling?"

"Mother! Tommy found a bedbug!"

Better Advertising.

A DUEL

The Editor-in-Chief of an Italian journal received the following letter a few weeks ago:

"Sir:

No one would send a second to a dog like you.

Consider yourself slapped on both cheeks and be grateful that I have not used my cane to chastise you."

The journalist responded:

"Incomparable Adversary:

I have complied with your demand and I thank you cordially for sending me two clouts by mail instead of delivering them in person.

Having been slapped, by letter, I now shoot you six times, through the head, with a revolver, and you die—by mail.

Consider yourself a dead man by the time you have read the last line of this letter.

I salute your corpse."

L'Indépendance Médicale

(Translated from French by G. B. L.)

TRUE NOBILITY

A Frenchman visiting in America was invited to attend the golden wedding of some friends of his host, and part of the evening's program was a repetition of the wedding ceremony.

The visitor did not fully understand the significance of the occasion but was much interested and, just before leaving, requested enlightenment from the husband.

Placing his arm around the shoulders of his elderly wife, he replied.

"It means, Monsieur, that this little lady and I have lived together for fifty years."

"Ah, yes! And tonight you have married her. How noble!"

HONEST ADVERTISING

Ad. in an Irish daily paper.—"Wanted: A gentleman to undertake the sale of a patent medicine; the advertiser guarantees that it will be profitable to the undertaker."

—*Medical Pickwick.*

WHICH OR BOTH

"I see this medicine is good for man or beast."

"Yes," said the druggist.

"Gimme a bottle. I believe that is the right combination to help my husband."

WALLOWED IN GOO

"Did you ever take the Carlsbad mud-bath treatment?"

"No, but I played in a Yale-Harvard game once."—*Life.*

PAWING THE SHEIK

"The new patient in Ward B is very good-looking," said the nurse.

"Yes," agreed the matron, "but don't wash his face. He's had that done by four nurses this morning."—*Tit-Bits.*

A FOLLOWER

"I've just heard your son was an undertaker. I thought you said he was a physician."

"Not at all. I just said he followed the medical profession."

THERE'S A DIFFERENCE

"But you said she sang beautifully."

"No, I didn't."

"What did you say?"

"I said she was a beautiful singer."

—*Nuevo Ruendo,* Spain.

"Where did the car hit him" asked the coroner.

"At the junction of dorsal and cervical vertebrae," replied the medical witness.

The foreman of the jury rose from his seat.

"Man and boy, I've lived in these parts for fifty years," he protested, ponderously, "an' I've never heered o' that place."

Thumbnail Therapeutics

INDICATIONS FOR TONSILLECTOMY

Consider the tonsils innocent until they are proved guilty. Wait until a child is four or five years old, at least. Mechanical obstruction, recurrent infections with lymphatic involvement and distant infections probably due to the tonsils are then indications for tonsillectomy.—DR. JOSEPH GARLAND, in *Bost. M. & S. J.*

WHEN TO OPERATE FOR A SKULL FRACTURE

All skull fracture cases demand a period of observation for accurate diagnosis and to determine their treatment. An emergency operation should be a rare occurrence. An immediate operation on a case suffering from shock would only hasten a fatal outcome, and all the physical examinations and tests one can use would be of no avail if the patient is not first relieved of this condition.—DR. OLIVER S. WAUGH, in *Canadian M. A. J.*

LOBELINE IN OPIUM POISONING

A patient poisoned with opium was in a typical comatose condition and was given 3 mgm. of lobeline, intravenously. Reaction appeared in 30 seconds but began to pass off in 3 to 5 minutes. He was then given 10 mgm. of lobeline hypodermically and 3 mgm. intravenously. This apparently moribund patient soon showed signs of recovering and was entirely well in a few days.—*Deutsch. med. Wchnschr.*

CARCINOMA OF THE BLADDER

Carcinoma of the bladder should never be touched with a knife. Surgical diathermy is ideal for localized cases. For advanced cases, use x-rays, but *not* radium.—DR. HENRY SCHMITZ, of Chicago.

PROPHYLAXIS AND TREATMENT OF ECLAMPSIA

Chloroform is best for controlling convulsions. Give rather cencentrated, 3 to 4 Gm. (never more than 10 Gm.) at a time—25 to 30 Gm. in a period of 5 to 20 hours. Give oxygen immediately after the paroxysm. Give narcotics, as needed, until there are no symptoms of an impending convulsion and continue for 12 to 24 hours postpartum. If symptoms of impending trouble are still present, give chloral hydrate, 1 to 1.5 Gm., three times a day. Venesection, with removal of 500 to 700 cc. of blood is a useful measure. Keep the patient's room as dark as possible, consistent with giving her the necessary attention.—DR. B. STROGANOFF, in *A. J. of Obst. & Gyn.*

SYPHILIS

In destructive lesions of syphilis, do not waste time with the iodides. Crowd arsphenamine, mercury and bismuth.—*Urologic & Cutaneous Review.*

ENDOCRINE THERAPY IN THE PSYCHOSES

There seems little doubt that endocrine disorders are factors in the etiology of various psychoneuroses and psychoses, and one may reasonably expect better results from vigorous organotherapy, in those mental cases which show symptoms of endocrine disturbance, than from other methods of treatment used alone.—DRS. E. H. WILLIAMS AND C. A. WRIGHT, in *M. J. & Rec.*

WATER IN NEPHRITIS

In nephritis, do *not* "flush the kidneys", which are already overworked. Reduce the intake of water to the lowest possible point—desiccate the patient—and keep it there until the inflammation subsides.—DR. GUSTAV KOLISCHER, of Chicago.

HOT BATHS IN THE CLIMACTERIC

With the cessation of ovarian activity, the body temperature falls. The "hot flashes" are automatic attempts to redress the balance. Hot packs, light baths and other measures which raise the body temperatures to normal for an appreciable time will afford more relief from these unpleasant symptoms than any drugs or hormones given by mouth.—DR. LEONARD WILLIAMS, in "Obesity".

STRICT MILK DIET

A female patient, 68 years old, who was confined to bed for nearly a year with nervous stomach and heart symptoms was restored to reasonable health when she voluntarily placed herself on a diet consist-

ing of 2250 Gm. of milk and 35 Gm. of butter daily. This diet represents 1850 calories and contains 80.79 Gm. of protein, 106.69 Gm. of fat and 111.22 Gm. of carbohydrates. The patient followed it strictly for 4 years.—DR. WALTER EBERDING, in *International Med. Digest.*

DIPHTHERIA PROPHYLAXIS

In 1919 Buffalo had 3,589 cases of diphtheria, with about 350 deaths. Immunization by toxin-antitoxin began in 1921. In 1925 there were 356 cases, with 31 deaths. —*Bost. M. & S. J.*

MEDICINE IN THE FUTURE

Future medicine will be essentially preventive and will very largely have to do with diet and dieting (vitamine therapy), endocrinal therapy, organotherapy, and protein therapy. The further development and rationalization of these physico-therapeutic agencies will largely prevent and reduce disease and will add very materially to the well-being and the life span of the human race.—DR. ALBERT SCHNEIDER, in *Am. Med.*

HIGH HEELS AND BACKACHES

Many indefinite backaches which fail to clear up under ordinary treatment are relieved at once by raising the heels of the shoes. High heels are not always the curse that they are made out to be, for by raising the heels the body is tipped back and so relieves the strain on the tense back muscles and hamstrings. — DR. J. WARREN SEVER, *Internat. J.M.& S.*

PRESSURE

In meningitis and other conditions which cause an increase in the intracranial pressure, spinal drainage is a very important and valuable procedure.—DR. JOSEPH BECK, of Chicago.

BISMUTH AND ARSPHENAMINES IN EARLY AND LATENT SYPHILIS

One intramuscular injection of bismuth and an intravenous injection of neoarsphenamine, given each week, succeed in the treatment of early and latent syphilis. Out of 18 latent cases, 14 became Wassermann negative in an average of 7 weeks. Secondary eruptions clear up rapidly and the blood Wassermann reactions are reduced from strong positives to negatives in an average of six weeks. — DR. CARROLL S. WRIGHT, in *Am. J. M. Sc.*

SPARTEINE IN INDIGESTION

If there are no organic changes in the stomach, sparteine sulphate, in moderate doses, will improve the blood supply to the gastric region, through its tonic effect upon the heart, and thus improve digestion.—DR. MAX GROSSMAN, in *Am. Med.*

RELATIVE HARMLESSNESS OF ACETYLSALICYLIC ACID

An arthritic patient who found that she could work when taking 70 grains of acetylsalicylic acid a day refused to stop taking it and in the last 3 years has ingested 76,000 grains (more than 10 pounds) of this drug. She does not complain of gastralgia and her kidney function is good.—DR. BLAKE F. DONALSON, in *Med. Clin. of N. Am.*

SODIUM NUCLEINATE IN PNEUMONIA

Intramuscular injections of 0.1 Gm. of sodium nucleinate, repeated in 48 hours if the temperature is still high, have resulted in a mortality of only 9.4 percent in a series of 117 cases of pneumonia (87 lobar, with 7 deaths and 30 bronchopneumonia, with 4 deaths).—DR. L. E. MILLER, in *South African M. Rec.*

WHOOPING COUGH

Diet, fresh air, sunshine and warm bedding help to lesson attacks.

Steam inhalations with compound tincture of benzoin or creosote, using Robinson's electric steam kettle, are beneficial.

A polyvalent vaccine of the Bordet-Gengou bacillus, in large doses (first dose, 1 billion; repeat every 2 to 5 days, p.r.n., doubling the dose each time), lessens the paroxysms and shortens the disease.

X-rays help in some cases.

Watch the heart and use stimulants if indicated.

Calcidin, in 1/3 grain doses, every half hour for 4 or 5 doses at night is the most effective drug to lessen the paroxysms.—RR. EDWARD J. LAMB, in *Cal. and Western Med.*

EPHEDRINE IN SPINAL ANESTHESIA

During spinal anesthesia the blood-pressure frequently falls markedly. In such cases, ephedrine in doses of 50 to 100 mgm. intravenously, causes a prompt prolonged rise in the pressure.

It may be given 2 or 3 minutes after the spinal anesthetic to *prevent* the fall in pressure; or to patients who, because of marked hypotension are not considered fit subjects for spinal anesthesia, it may be given *before* the anesthetic.—DRS. RUDOLPH AND GRAHAM, in *Am. J. M. Sc.*

EYE BURNS

After burns of the conjunctiva with lime, ammonia or acids, a 2-percent solution of butyn in caster oil makes a satisfactory analgesic application and prevents symblepharon.—DR. CHAS. A. YOUNG, in *Virginia M. Monthly.*

GLUCOSE SUBCUTANEOUSLY

No ill effects result from the subcutaneous injection, in infants, of a 10- to 15-percent solution of glucose. If care is used, 10 cc. per pound of weight may be given in this manner.—DRS. TISDALL, DRAKE and BROWN, of Toronto.

DOSAGE OF POLLEN ANTIGENS

The dosage of pollen antigens ordinarily given is too small. If the patient will tolerate doses up to 0.5 cc. of a 1:20 dilution you can almost promise freedom from attacks, as the high doses give 95 percent relief. The dosage must be adjusted to the individual and increased carefully. Do not stop at 15 injections but give 50 if necessary.

Immunity to pollen is very brief. Give a weekly dose after immunization is complete and repeat the course of treatment every year.

Perennial asthma is almost if not always due to an *inhaled* factor.—DR. M. B. COHEN, of Cleveland, O.

DELIRIUM TREMENS

In delirium tremens one of the best treatments consists in giving intravenous injections of 10-percent, sterile, sodium chloride solution two or three times a day. The quantity should be 40 to 50 cc., which should be given slowly and carefully. If it escapes under the skin it is liable to cause sloughs.—DR. K. S. WEST, of Cleveland, O.

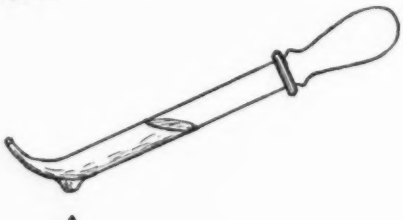
SURGERY IN GASTRIC ULCER

Following gastroenterostomy there is no change in the gastric acidity and the new opening does not drain the stomach. The gastric contents goes through the pylorus if that is open.

After resection of the pylorus and antrum the acidity is reduced or abolished. Resection is a more serious operation and requires a more highly specialized technic, but under the conditions the mortality is not unduly high.—DR. M. E. BLAHD, of Cleveland, O.

MEASURING SMALL DOSES

If medicines are to be measured in drops they should not be dropped from the tip of a dropper, but from the underside, as in the figure.



To obtain half a teaspoonful, mix a teaspoonful of the medicine with a like quantity of water and give a teaspoonful of the mixture.

A 5-minim glass can be made to measure a 1-minim dose by adding 20 minims of water to 5 of the medicine and giving 5 minims of the mixture.—DRS. GRIFFITH AND MITCHELL, in "Diseases of Infants and Children."

SEDATIVES BEFORE OPERATION

The night before operation every surgical patient should receive the necessary medication to assure a satisfactory number of hours of restful sleep. If this is done he will come to the operating room in a favorable condition.—DR. JOHN BRYANT, in *Bost. M. & S. J.*

QUININE BEFORE NEOARSPHENAMINE

When neoarsphenamine is given it releases treponemas in the blood. Quinine should be given for several days before treatment is begun.—DR. G. MILIAN, in *Presse Médicale*, Dec. 15, 1926.

DEATHS FROM SERUM INJECTIONS

A few deaths from serum injections have been reported (about 1 in 70,000). These have resulted from the *first* injection in cases of *status lymphaticus.* There is prac-

tically no danger in giving a second injection of serum to a person who has had no alarming symptoms following the first.—DR. RALPH O. CLOCK, in *Ann. Clin. Med.*, Dec., 1926.

VACCINATION AGAINST PNEUMONIA

Persons who are especially susceptible to pneumonia should be vaccinated against it; and also groups of persons who are living together under abnormal conditions, such as recruits during war time.—DR. RALPH O. CLOCK, in *Ann. Clin. Med.*, Dec., 1926.

NEURASTHENIA

During the War the inhabitants of the countries most affected were practically free from neurasthenia, because they were too busy to introspect.

The neurasthenic should get some work to do, and do it *with his whole heart*, at the same time cultivating a love for *good* books and music.—DR. NICHOLL, in *Am. Med.*

MASSAGE IN HEADACHE

Skilled massage of the head and neck, and manipulation which includes gentle traction of the head from the trunk, bring great relief in some cases of headache.—LORD DAWSON OF PENN, in *Canad. M.A.J.*

TREATMENT OF ARTHRITIS

Salicylic acid is the most reliable remedy for arthritis. O-iodoxybenzoic acid is now on trial.

In the beginning, keep the patients saturated with sodium salicylate by giving retention enemas, twice a day, of 50 to 100 grains of the drug in 2 ounces of thin, boiled starch solution, given with a 4-ounce funnel attached to a large bladder catheter.

The starch solution is made by putting 2 drams of laundry or corn-starch with 12 ounces of water and boiling hard for five minutes. Cool and set aside for use as needed.

Later, give 10- or 15-grain doses of sodium salicylate or acetylsalicylic acid, 3 or 4 times a day, in the middle of meals, for 3 months; then give every other week for the next 15 months.

Active exercise for all affected joints and a diet adequate to maintain weight and strength should also be used.

Dr. B. F. Donaldson, in *Med. Clin. of N. Am.*, Jan. 1927.

SODIUM IODIDE, INTRAVENOUSLY, IN SYPHILIS

The intravenous administration of sodium iodide solution produced, in our cases, clinical results which could not be duplicated by the administration of either potassium or sodium iodide by mouth.—DR. L. L. SCHWARTZ and G. J. BUSMAN, in *Am. J. Syphilis.*

COUGH IN PNEUMONIA

In cases of pneumonia, where the cough is racking and non-productive, frequent spraying of the throat with epinephrin solution or with 3-percent ephedrine, diluted with 6 or 7 parts of a mild, alkaline antiseptic solution, is helpful.—DR. V. P. SYDENSTRICKER, in *J. S. Caroline M. A.*

METHENAMIN IN PYELITIS

In cases of acute pyelitis of rabbits, hexamethylenamin (methenamin) was found more effective in treatment than hexylresorcinol or mercurochrome. In cases of chronic infection of the urinary tract in children, hexylresorcinol, used in the dosage and for the period indicated, had practically no effect. Hexamethylenamin proved successful, in most uncomplicated cases, in two weeks or less.—DR. HENRY T. HELMHOLZ, in *South M. J.*

Current Medical Literature

AVIATION MEDICINE

An editorial in *Int. Med. Digest* for February, 1927, gives some interesting points regarding aviation medicine, and another, in the same number, issues a call from the U. S. Department of Commerce for physicians qualified to examine aviators.

The first of these calls attention to the various unusual physical conditions which fliers must undergo: The sudden and extensive changes in pressure and oxygen concentration; the tremendous physical and mental strain; the profound disturbances of equilibrium. All these introduce factors of tolerance and resistance which have heretofore, never been encountered by human beings, except, to some extent and rarely, by baloonists and mountain climbers. We have only begun to study and evaluate the importance of these factors.

Mention is made of the School of Aviation Medicine which was established by the Army for the training of Flight Surgeons and of a textbook on the subject by Dr. Louis H. Bauer, whose training amply qualifies him to write such a volume. The book deals with the selection, classification and maintenance of aviators.

The physiology of aviation is now being studied and the altitude classification test by which a flyer's individual reactions to altitude can be definitely determined in the laboratory without risk to his life or the destruction of a plane is certainly one of the most valuable and interesting things that have come out of this special study.

The apparatus for this test, which is known as the Henderson-Pierce rebreather, consists of an iron tank of 52 liters of air. On either side of the tank is a metal pipe, one being an inspiratory pipe, the other an expiratory pipe. There is a one-way flutter valve in each pipe which prevents the current of air from going in any but the right direction. In the expiration pipe there is placed a cartridge of dry sodium hydroxide molded in boat form, which removes the carbon dioxide from the expired air as it passes through it. Both pipes are connected with flexible rubber tubes at the distal ends which are in turn connected with a mouth-piece. A nose clip is placed upon the nose, the arrangement being somewhat similar to that of a gas mask. The tank is fitted with valves so that the subject may breathe either air from the tank or the room as is desired. When the test starts the valve is turned so the subject is connected with the tank and he remains so connected until the end of the run when the valve is immediately closed.

The individual aviator undergoing the test breathes the air from the tank and exhales it back into the tank, minus the carbon dioxide which is absorbed by the sodium hydroxide cartridge. In other words, as the test proceeds he is constantly breathing an air in which the oxygen content is steadily diminishing, just as he does when he is flying from sea level to an altitude. During the test he has certain duties to perform, simulating the things he does when he is flying. These are watched by a psychologist, while his heart and blood pressure are carefully watched by a clinician. As soon as he shows signs of complete inefficiency the mask is removed and after two or three breaths of fresh air he is normal again; frequently he asks why he was removed and is loath to believe that he was not performing everything in a first-class manner.

The air is analyzed at the end of the run to determine the exact percentage of oxygen; thus the altitude reached is determined. The physiologist, clinician and psychologist then grade the flyer. The grades are A, B, C and D, the lowest grade given by any one of the three observers determining the final class. Class A is unrestricted as far as altitude is concerned, class B restricted to 15,000 feet, Class C to 8,000 feet and Class D is grounded as unfit to fly. Of the first three classes about 61 percent are graded A, 25 percent B and 14 percent C.

When a flyer is restricted to a certain altitude by means of this test it does not mean that he cannot fly above this limit. What it does mean is hat he will not do efficient work above that limit. Repeated flights or work, at an altitude in excess of his limit, place him at too great a strain and limit his efficiency.

This will give some idea of the elaborate and highly technical work which must be done by the specialist in aviation medicine, who must be familiar with many matters concerning the eye, ear, nose and throat; with psychology and psychiatry; with general physiology; and must also be a keen and accurate observer and a good deal of a mechanic.

The Department of Commerce classifies aviators as: transport pilots (those who fly with passengers); industrial pilots (those who carry mail or express or engage in other commercial activities); and private pilots. Licenses will be given in all three classes, after the applicant has passed the physical examination required for his

class. The physicians who make these examinations must first be certified as competent by the Department, and they are in great need of more of them. Eventually, every town of any size will have at least one.

Physicians who are interested in this fascinating new field of work can obtain further information by writing to the Medical Director, Air Regulations Division, Department of Commerce, Washington, D. C.

THE CARE OF THE AGED

The fact that old people are not young people is frequently overlooked and we treat them as though they were robust adults.

Geriatrics is as distinct a specialty in medicine as is pediatrics, and requires special preparation for its successful practice.

Dr. Malford W. Thewlis, of New York, discusses this subject in *Med. Times* for February, 1927, and sums up his points as follows:

1.—While geriatrics is that branch of medicine which deals with the diseases of old age, it yet includes the prevention of premature senile changes and the care of the aged.

2.—A study of senile degeneration is necessary to a cursory study of old age.

3.—The greatest mistake in treating old patients is to endeavor to produce results which would be normal to maturity.

4.—Some of the greatest accomplishments in literature, art and science have been made by men and women past the age of eighty.

5.—Business men can do a great deal in the future to arrange for satisfactory contributory pension plans.

6.—Unemployed old men are a burden to the State and by solving some of the economic problems of old age the State could materially reduce its expenses.

7.—Life insurance annuities are the best solution for an income for old age.

8.—Work should be provided for the aged.

9.—Their economic independence will cure many of their indefinite ailments.

10.—Gardening, skilled mechanical occupations, toy shops, special work in factories, will provide satisfactory labor in old age.

11.—Toy shops for the aged are especially practical.

12.—Life can be prolonged if more interest is shown in the aged.

13.—The importance of the endocrine glands in relation to old age has been greatly exaggerated.

14.—The most fatal diseases in old age are heart disease, cancer and pneumonia.

15.—Women should be observed carefully at the menopause.

16.—Old age is due to the fact that after a period of time in which cells multiply, the cells cease to do so.

17.—The factors influencing old age are heredity, focal infection, eugenics, infectious diseases, disorders of metabolism, the individual's mode of living, and the excitement and worry of modern life.

18.—The hygiene of old age has been summed up by Williams: "Fresh air, meager fare, freedom from care".

19.—Work is necessary to the well-being of the aged.

20.—Periodic health examinations should detect many diseases in their beginning, thus warding off premature senility.

21.—Most old people are spare eaters; they are usually thin.

22.—About 2000 calories per day are required in old age.

23.—Exercise is of great importance.

24.—Alcohol is of great value in many conditions of old age.

25.—Rejuvenation by operation or x-ray treatment is discredited.

26.—Keep senile cases out of bed.

EPHEDRINE IN HYPOTENSION

Dr. T. Grier Miller has had some interesting experiences with ephedrine and reports these, as well as the results of his studies, in *Ann. Clin. Med.* for March, 1926.

The use of this drug for the relief of the paroxysms of bronchial asthma is now rather generally understood, but Dr. Miller devotes a good deal of attention to the consideration of its value in cases of shock and low blood pressure. He does not feel that ephedrine has solved these difficulties, but believes that it has therapeutic possibilities which deserve further study.

There are three types of hypotension: That due to shock; a symptomatic variety resulting from infectious fevers, myocardial failure and exhaustion; and essential hypotension.

Chen has shown that when shock is produced in dogs by histamine, peptone, anaphylaxis or surgical trauma, the blood pressure can be raised to practically its original level and maintained there for several hours by ephedrine in doses of from 1 to 3 mgm. per kilogram of body weight. He has also shown that the amplitude to cardiac contractions is promptly increased. Dr. Miller has verified this latter finding.

In cases of shock, ephedrine must be given *promptly* to produce good results. In many cases it is better to give epinephrin first, for its immediate effect, and follow it at once with ephedrine, to maintain the effect.

In the second type of hypotension it is not always wise to increase the blood pressure, but there are some cases where this is helpful. The physician must study each case and decide the therapy on its merits. If it seems wise to relieve the hypotension, ephedrine should do it satisfactorily. In a few cases of Addison's disease it raised the

blood pressure, temporarily and gave rise to a sense of well-being and increased strength.

In the cases of essential hypotension ephedrine cannot be expected to alter the underlying conditjon permanently, but it is known that even a slight increase in the blood pressure in these cases often produces an unexpected improvement in general bodily and mental health, and this drug is worthy of a trial.

In the *Atlantic M.J.* for August, 1926, in summing up an article on the same subject, Dr. Miller remarks:

"For all of these types of low blood pressure, ephedrine may be used as a temporary measure. In some it will aid in overcoming the essential disturbance, as in shock, by promoting conditions favorable to the elimination of destruction of the causative intoxication. For others it will merely increase the blood pressure temporarily by its stimulating action on the heart, but even by so doing there is reason to believe that it may bring about changes favorable to the alleviation of the patient's symptoms and the improvement of his general state of health."

A SPECIFIC SERUM FOR RHEUMATIC FEVER

A serologically specific, nonhemolytic streptococcus has been isolated from the blood and secretions of several patients with chronic arthritis, by Dr. James C. Small, of Philadelphia, who reports his findings in *A. J. Med. Sc.* for January, 1927. This organism, which has met all of the ordinary tests for specificity as the causative agent in rheumatic fever, is a spherical, Gram-positive coccus, forming short chains, for which Small suggests the name, *Streptococcus cardio-arthritidis.*

Antitoxic serums have been prepared from this organism, using the rabbit and the horse, and have been used in the treatment of clinical cases of acute and chronic arthritis, with striking results in some cases.

Dr. Small believes that the chief field of this serum will be its use in the early stages of the first attack of rheumatic fever, and that such use will largely prevent the complications which are now so frequent—endocarditis, myocarditis, pericarditis, pleuritis, tonsillitis, chorea, etc.

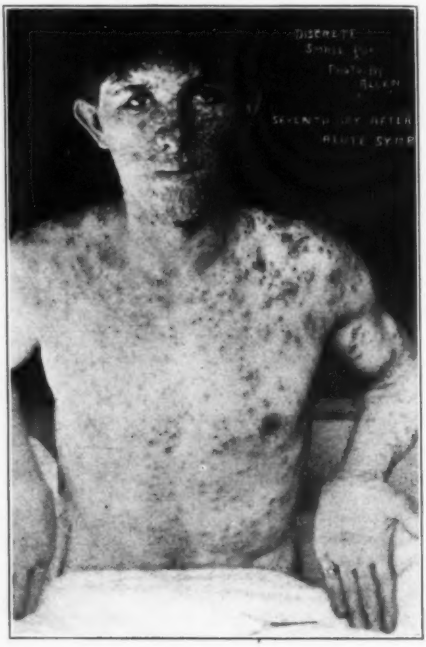
In this article, full details of the cultural and morphologic characteristics of this new organism are given in full, and the author hopes that other workers will immediately set about studies which will verify or refute his findings.

It is, of course, too early to become unduly sanguine over this new serum, but the results so far are very interesting and encouraging. If it works out we shall be able to control one of the greatest scourges of childhood and adolescence.

SMALL-POX

There are four clinical types of small-pox: discrete, confluent, hemorrhagic pustular and purpuric. Drs. Sweitzer and Kano, reporting in *Archiv. Dermat. & Syph.* for January, 1927, believe that "alastrim" is none other than a mild form of small-pox.

Of 581 patients admitted to a hospital during an epidemic of small-pox, 246 (42 percent) died. *All of these were unprotected by vaccination.*



Discrete Small-pox. Mild Case.

The purpuric form is atypical. Initial symptoms are sudden and severe. About the second day an erythema appears and spreads over the forehead, face and finally the extremities. This darkens until the patient is almost as black as a negro. Large blebs, filled with bloody serum, sometimes appear. Hemorrhages under the conjunctiva and mucous membranes occur early and there is frequently bleeding from the nose, mouth, rectum, vagina and bladder. *The typical, pustular eruption seldom appears.* These cases are practically always fatal.

Small-pox is especially severe in pregnant women and in infants.

In the diagnosis of ordinary pustular small-pox one must consider measles, chicken-pox, pustular syphilides, drug eruptions and erythema multiforme. In small-

pox the papule is hard and shotty and cannot be obliterated by the examining finger as can that of chicken-pox. In the latter disease the lesions appear in successive crops. The blood, in pustular small-pox shows a leucocytosis with a relative lymphocytosis.

Photo from *International Medical Digest.*

Confluent, Hemorrhagic Small-pox. Fatal Case.

In diagnosing the purpuric type one must consider purpura hemorrhagica, purpuric drug eruptions, scarlatina, measles and septic exanthems, especially those of pregnancy.

The best treatment for small-pox is *prevention* by vaccination and revaccination every 5 to 7 years.

NEUTRAL ACRIFLAVINE FOR SKIN DISINFECTION

Postoperative skin infections are by no means a thing of the past, as every surgeon knows, and Drs. Martin B. Tinker and Henry B. Sutton, of Ithaca, N.Y., believe that this condition is due to the inefficiency of most of the substances ordinarily used for skin disinfection.

These investigators have carried out exhaustive tests of the commoner antiseptics and report their results in the *J.A.M.A.* for October 23, 1926. They state that tincture of iodine, trintirophenol, Harrington's solution, mercurochrome and potassium mercuric iodide will not kill most of the resistant and some of the less resistant pathogenic bacteria, especially when penetration is required.

These authors believe that the aniline dyes, especially neutral acriflavine, offer most interesting possibilities. They find that dichloramine gives perfect sterilization of the *surface* of the skin; while neutral acriflavine—a 5-percent solution in 50-percent alcohol and 10-percent acetone—completely sterilizes the *whole thickness* of the skin, no bacterial growth having been obtained in skin scrapings or in strips of skin cut from operative wounds.

Neutral acriflavine is expensive, but if a small swab is used carefully in painting the skin, it is possible to sterilize the field, in the less extensive operations, with a few drams of the solution.

The authors feel that their investigations—having technicians go into the operating room without warning and examine the hands of surgeons and nurses and the field of operation—have materially improved the aseptic technic in the institution where they are working, and they recommend this practice to other hospitals, together with a thorough teaching of methods and technic of skin disinfection.

PERCUSSION AND AUSCULATION

We cannot carry a laboratory with us everywhere we go, but we always have our fingers and our ears, and generally a stethoscope, so we are never at a loss for the means of making a diagnosis in a wide variety of cases.

Dr. Walter Olshansen, writing in *Med. Klinik* for November 5, 1926, states his belief that the fingers are the best instruments for percussion, because we thus practice palpation at the same time; and that a simple stethoscope, fitted to our own ears and having a bell 3 cm. in diameter, is superior to more complicated instruments.

Examination in bed is never reliable. If possible, the patient should sit on a stool placed on a box 12 inches high and 20 to 30 inches square. This allows the examiner to stand upright and increases resonance. While examining the chest the patient's arms hang at his sides; during the posterior examination they are folded over the chest, the shoulders are drooped and the head bent strongly forward. If he is to cough he should turn his head aside and not hold a handkerchief over his mouth.

Percussion should always be *comparative*, where this is possible. Sounds should be estimated as to what extent they are "filled with air." Normal lung resonance should always be kept in mind, and percussion over the liver and stomach will serve as samples of dullness and tympany, respectively, for comparison with the tones elicited in the case in hand.

Auscultation largely depends for its value upon wise instructions as to breathing and coughing. Simple terms for describing the breath sounds are: Vesicular (normal), vesiculo-bronchial, broncho-vesicular, bronchial and amphoric.

The auscultation of the voice is important in some cases. Soundless whispering should be heard well in the apices, posteriorly, and at the shoulder spine. Below this it disappears abruptly. If it persists below that point it suggests thickening of the lung roots.

The recognition of rales is of the highest importance and these are heard best when fluids present move as much as possible, especially when diagnosing cavities. Quiet breathing is not sufficient for this purpose. The best plan is to have the patient exhale as fully as he can without effort; hold it for a moment; then cough and immediately take a full, deep inspiration. The pause gives the examiner a chance to concentrate his attention upon what he will hear during the following inspiration. This is important because the clearest impressions are formed during the first few respirations of an examination.

Careful instructions as to breathing should be given to the patient before the examination is begun, and if he seems to have failed to understand them, stop and repeat.

Auscultation should begin at the point where percussion, roentgenography, or other signs or symptoms indicate that pathologic changes are most likely to be found.

LOW BLOOD PRESSURE

There are two types of hypotension: acute or temporary and chronic or persistent. Low blood pressure frequently occurs in acute, infectious diseases and is so constant in influenza as to constitute a diagnostic factor.

In *Southern M. & S.* for January, 1927, Dr. W. M. Johnson urges that every patient with a "grippy cold," even without fever, be kept in bed during the acute stage; and if fever is present, for 1 to 3 days after the temperature is normal, following which he should take an equal length of time for quiet convalescence before going to work.

Among conditions causing low blood pressure are: tuberculosis, anemia, myocarditis, coronary thrombosis (sudden and dramatic fall), and the *habitual* use of coal-tar products.

Hypotension favors longevity but not physical vigor.

PYELITIS IN PREGNANCY

Infection of the renal pelvis is a frequent complication of pregnancy and the puerperium. It is frequently unrecognized and its treatment requires skill.

In *Southwestern Med.* for March, 1927, Dr. W. R. Jamieson, of El Paso, Texas, discusses the subject rather fully and reports cases.

The underlying cause of renal infection in pregnancy is obstruction of the ureter, with resulting renal stasis. The greatest number of cases of pyelitis occur before the fifth or sixth month of gestation. The infecting bacteria are generally members of the colon group.

The *symptoms* are sudden or gradually-developing pain in the loin, followed by fever, rapid pulse, malaise, rigors, vomiting, headache, and sweats. Frequency, urgency and pain on urination are sometimes the earliest symptoms. Occasionally the symptoms are abdominal pain and distention or they may resemble pleurisy or pneumonia. In about 60 percent of cases the onset is sudden. Diagnosis is based upon pain, fever and pus in the urine. Absence or mildness of abdominal tenderness and rigidity will usually differentiate from appendicitis. If in doubt, cystoscopy will generally establish the diagnosis.

The *treatment* consists of rest in bed; a purge of calomel and podophyllin, followed by a saline: methenamin, combined with sodium phosphate by mouth, 2 or 3 Grams daily, sometimes helps; mercurochrome, intravenously, if given, should not be continued long, for fear of salivation and because of the severe reactions; caprokol seems to be useless in B. Coli infections. The best results have followed intravenous injections of *salihexin*, given daily until effects are produced. Reactions from this drug are rare and mild.

The *diet* is important. A woman weighing 130 pounds should receive 2,400 calories. *Cream* is better than milk and should be used freely. Milk sugar or cane sugar gives the carbohydrate allowance. Cereals and butter make up the diet. Water should be given freely.

In severe and obstinate cases, drainage and flushing of the kidney pelvis, through a retained ureteral catheter, may be necessary.

MILK INJECTIONS IN GONORRHEAL OPHTHALMIA

Dr. J. T. Hooker, Medical Corps, U. S. Navy, found gonorrheal ophthalmia very prevalent in Haiti and the conditions for its treatment discouraging, so he decided to try milk injections. His results appear in *U. S. Naval Med. Bul.* for January, 1925.

Ten hospital cases were treated in the usual manner—iced compresses, instillations of a silver salt, boric acid solution irrigations every 15 minutes or as indicated. The eyes became free of gonococci in 10 days and recovery was complete in 16 days.

Ten other similar cases, under the same conditions, received the same treatment plus intramuscular injections, in the buttocks, on alternate days, of 3 to 10 cc. of whole cow's milk boiled for 30 minutes. (Ten cc. was the adult dose.) These patients had reactions, with fever going as high as 102° F. and then subsiding in a few hours. The eyes of these patients were free from gonococci in 4 days and they went about their duties after 6 days.

These results were so favorable that the Doctor tried the injections on 32 outpatients who came to the dispensary for them and who received no other treatment whatever. These, too, were free from gonococci in 4 days and appeared cured in

6 days. None had a spread of the infection from one eye to the other though no precautions were used to prevent it.

Children respond to milk injections better than do adults, usually clearing up after the first injection.

The author feels that the dead bacteria present in the milk have something to do with the results, and that improvement can be expected in all cases which show reactions after the injections.

SAWDUST BEDS FOR THE INSANE

The helpless insane who are also untidy from loss of sphincter control are a great problem, as the ordinary beds, with rubber covers and sheets, are uncomfortable and the patients sometimes roll off them and receive more or less severe injuries. The laundry, too, is a considerable factor as these patients frequently soil from 12 to 18 sheets in 24 hours.

In *J.A.M.A. for* April 16, 1927, Dr. William R. Thompson, of Lexington, Ky., describes a type of bed which has proved highly satisfactory for such patients. It consists of an oblong box of 1 inch dressed boards, 6½ feet long, 30 inches wide and 18 inches deep, standing on legs 12 inches high and painted white. Casters may be put on the legs.

The box is filled with fresh sawdust, which is passed through a ¼ inch sieve, to within 6 inches of the top. The patient, wearing a short night-shirt, is placed directly on the sawdust, which conforms to the shape of his body, and covered with a sheet and such blankets as are necessary. When the contents of the box are soiled with urine or feces, the dampened material is immediately removed with a scoop and destroyed. Fresh sawdust is added to maintain the 12-inch level.

It is claimed that such a bed prevents accidents; keeps the patient dry and comfortable, thus preventing bedsores; is neat, sanitary and odorless; facilitates the care of patients; is cheap to build and maintain; and reduces labor and laundry bills.

[It would seem that, in certain difficult cases, such a bed could be used in private practice as well as in institutions.—ED.]

LATENT INFECTIONS AND ANAPHYLACTIC SHOCK

Dr. G. Milan, in *La Presse Médicale* for December 15, 1926, states that, in order to produce nitritoid crises, substances must be vasodilator in their effects or poisonous to the endocrinosympathetic system.

The best remedies for such states are epinephrin, pituitary extract and like substances, in doses proportional to the endocrinosympathetic deficiency. If syphilis is the basic cause of the condition, there is hope of a permanent cure by mercury.

Some of these anaphylactic symptoms are due to the stimulation of a latent organism by the introduction of some other organism or some drug. Potassium iodide produces sympathetic alteration when it causes purpura, palpebral edema and conjunctival injection; biotropic stimulation when it causes an acneiform eruption due to staphylococci.

Physical causes, such as heat, cold, x-rays, etc., may also arouse latent infections.

BLOOD PRESSURE

Dr. J. T. Scott feels that the sphygmomanometer, if properly used, is invaluable to the general practitioner, and, in *J. Kans. M. S.* for January, 1927, gives the following table of average pressures at various ages:

Age	Sys.	Dias.
10-17	80-110	50- 70
20-30	120-125	70- 85
30-40	120-130	75- 90
40-50	125-135	80- 90
50-60	130-140	80- 90
60-70	135-145	85-100
70-80	140-150	90-105

This is the socalled male table and should be reduced 10 mm. for females.

The systolic pressure alone can not be depended upon unless supported by the diastolic and pulse pressure, together with the pulse rate. It is also important to know the total amount of energy spent by the circulatory system in a minute or an hour. The "energy-index," as someone has named it, is obtained by multiplying the sum of the systolic and diastolic pressures by the pulse rate. Recognized authorities state that the maximum energy index consistent with safety to the vascular system is 21,000 mm. of mercury. The normal index range is from 13,000 to 20,000. When less than 13,000 it suggests general weakness; when above 20,000 an excessive circulatory load which will sooner or later, if not corrected, lead to disastrous consequences.

The diastolic pressure is a better guide to diagnosis than the systolic. Systolic pressure is easily influenced by psychic phenomena and its elevation is more or less a physiologic process; the elevation of the diastolic pressure depends largely upon pathologic changes. Pulse pressure—the difference between the systolic and diastolic pressures—when taken alone, represents the force applied to the arteries by the heart during systole or the heart's energy which produces a distention of the arteries known as the pulse. The pulse pressure represents the heart load or overload and is of great importance in prognosis.

All readings, especially the first, should be taken in the horizontal, sitting and standing positions. The systolic and diastolic should normally be highest standing; lower sitting; lowest supine. A reverse of these readings indicates vasomotor insufficiency, myocardial weakness or an accumulation of blood in the splanchnic area. With a normal heart, the pulse pressure

will fall upon changing from the supine to the erect position. If there be a rise in pulse pressure on changing from the supine to standing position it points to cardiac hypertrophy.

The diastolic pressure in changing position from horizontal to erect rises in the normal person. If it lowers, look for valvular diseases of the heart. Should there be a fall in all pressures in changing from supine to standing position it points to cardiac dilatation, which an examination of the heart will confirm. A high diastolic pressure always means great vascular tension and when constant points to cardiovascular changes. A normal systolic, high diastolic with high pulse rate suggests a poor myocardium. The deficient heart muscles require an increased rate of contraction to overcome the peripheral resistance or diastolic pressure. This condition leads to cardiac dilatation.

WRONG IDEAS REGARDING ENDOCRINOLOGY

Many physicians who have given no especial study to the endocrines labor under several misapprehensions in regard to them, in the opinion of Dr. James H. Hutton, of Chicago, writing in *Fraser's Notes* for March, 1927.

The four chief errors listed by Dr. Hutton are:

1.—That endocrine disorders are strange and rare.

2.—That our knowledge of the ductless glands is so meager that diagnoses can be made only in severe or advanced cases.

3.—That endocrine therapy is of no value.

4.—That all endocrinologists are cranks who can see nothing in medicine beyond their specialty.

In correcting these misapprehensions he suggests:

1.—Since goiter and diabetes are endocrine disorders, we have no cause to feel that such conditions are rare. Neither are pituitary nor gonadal dysfunction at all uncommon. If we are on the watch for such conditions they seem no stranger than do other morbid states.

2.—The fact that diagnoses of the milder degrees of thyroid, adrenal, pituitary gonadal and other endocrine disorders are not made with greater frequency is not due to any lack of definite diagnostic signs and symptoms, but to the fact that most physicians have not yet become accustomed to looking for or considering these indications. Anyone who will give the subject a reasonable amount of study and attention can readily recognize endocrinopathies.

3.—The value of endocrine therapy in cretinism and myxedema (with thyroid), disorders of the menopause (with ovarian substance, of diabetes (with insulin, which is an endocrine extract), and of a number of other conditions is now beyond question by anyone.

If cases are properly studied and the proper, *specific* substance administered, results are highly gratifying.

4.—In no field of medicine are a full and complete history, a wide and accurate knowledge of physiology and a sound and clear impression of the status of the patient as a whole of so great importance as they are in the study of an endocrine case.

The endocrinologist is on trial by his professional brethren and will, in general, be found to be a keen and well-informed "generalist," prepared to meet the most painstaking scrutiny of his methods and results.

ISOLATION IN THE PROPHYLAXIS OF ACUTE INFECTIOUS DISEASES

There is no true transmission of disease, but only of disease-producing organisms. The susceptibility of the exposed persons is an equally important factor.

In *Deutsch. med. Wchnschr.* for November 5, 1926, Dr. H. Kleinschmidt urges the importance of isolating patients with acute infectious diseases, to prevent the spread of infection.

If a measles case is isolated, even after the eruption has appeared, the spread of the disease is often prevented. It is safest to continue this isolation until the disappearance of the rash.

Whooping cough is very dangerous to young children and distressing to any patient. In public institutions every suspicious case should be at once separated from other children. This disease cannot be carried by a third person, but measles can be so carried.

Infection with diphtheria and scarlatina depends upon individual susceptibility, which can now be determined by the Schick and Dick tests, respectively. Measures of isolation required depend upon the results of these tests.

New Books

WARING: OPERATIVE SURGERY

MANUAL OF OPERATIVE SURGERY. *By Sir Holburt J. Waring, M.S., M.B., B.Sc. (Lond.) F.R.C.S. Sixth Edition. Humphrey Milford, Oxford University Press, London and New York.* 1927. *Price* $5.25.

The first edition of this book appeared in 1898. During the World War two impressions of the fourth edition, which was published in 1912, had to be printed to meet the growing demand for this manual. The fifth edition was published about five years ago. The present edition has undergone a thorough revision, obsolete operations having been abandoned while a number of newer operations have been added.

Although the book consists of nearly nine hundred pages with 618 figures in the text, it does not appear bulky and is easily carried about.

Considering that this book is a manual and not a textbook the subject has been handled with such care and forethought that any general practitioner will find it an excellent guide to operative technic.

The book opens with a glossary of the international anatomical terminology. This the reviewer believes to be a very valuable part, since it removes all opportunities for misunderstanding the text. For example the word "fibular" is defined as being used in reference to the medial and lateral borders of the leg.

The old terminology of bones, muscles, the nervous system, etc., is placed opposite the new names, so that the student has a ready reference for the uniform use of anatomic designations, as finally adopted by the B.N.A.

A short introductory chapter deals with infections and their causes. Why this subject should be discussed in a work of this character can be explained only by the following chapter which deals with asepsis. In addition, this and the third chapter deal with general technic.

The remaining thirty chapters describe the operations on individual organs, including those used in gynecologic, ophthalmic, aural and nasal surgery. One chapter is devoted to operations on the hypophysis cerebri.

The operations are discussed critically and most of the illustrations are well excuted and well printed.

When it is considered that surgery has progressed so far that even in encyclopedic works the entire range of surgery is not fully covered, no one will expect an exhaustive presentation of operative technic in a manual. But careful scrutiny shows that the average general surgeon will find in the volume all he needs for his daily work.

This is an excellent book to have handy at odd moments when one can use it to refresh one's memory, particularly so because the work has been brought up-to-date.

Perhaps one criticism may not be amiss. The book refers to diathermy for affections in which this agency has proved efficacious. While any one who so desires can today secure all the necessary information on the employment of diathermy for surgical purposes, the technic of electrocoagulation should have been described, at least sufficiently to familiarize the reader with the method of operating by means of surgical diathermy.

Taken all in all this is undoubtedly one of the best manuals on operative therapy in the English literature.

G. M. B.

FITZGERALD: PREVENTIVE MEDICINE

AN INTRODUCTION TO THE PRACTICE OF PREVENTIVE MEDICINE. *By J. G. Fitzgerald, M.D., L.L.D., F.R.S.C. Assisted by Peter Gillespie and H. M. Lancaster. Second Edition. St. Louis: The C. V. Mosby Company.* 1926. *Price* $7.50.

Preventive medicine is assuming a larger and larger place in the life of the physician, and too few are thoroughly informed along this line.

This—the second—edition of Fitzgerald's book, embodies the latest ideas regarding scarlet fever and other communicable diseases and the material is better arranged. It covers the whole field of epidemiology and preventive medicine, as well as personal and community hygiene and sanitation, in a simple and practical manner, so as to serve as a text and reference book for students and practitioners.

Of interest and value to all physicians, but especially to county and town health officers and others who are engaged in public health work.

ROE: PRINCIPLES OF CHEMISTRY

PRINCIPLES OF CHEMISTRY. An Introductory Textbook of Inorganic, Organic and Physiological Chemistry for Nurses and Students of Home Economics and Applied Chemistry. With Laboratory Experiments. *By Joseph H. Roe, Ph.D., Professor of Chemistry, George Washington University Medical School. Illustrated. St. Louis: The C. V. Mosby Company.* 1917. *Price* $2.50.

The following quotations from the preface indicate the purpose of this book:

"This book has been written to meet the requirements of the forty-five to sixty-four courses in chemistry for nurses, recently recommended by the National League of

Nursing Education. Special efforts have been made to use language as simple and popular as is consistent with scientific writing. The applications of chemistry to biology, medicine, and the arts, have received special emphasis. A comprehensive set of laboratory experiments designed to supplement the theoretical work presented and to give the student training in laboratory technic, is included in the latter part of the book."

The author has accomplished his purpose very admirably and has produced a book which can also be used by anyone without previous scientific training who desires to acquire an understanding of the fundamentals of chemistry and some of its manifestations in physiology and medicine.

E. B. V.

GOULD: MEDICAL DICTIONARY

GOULD'S MEDICAL DICTIONARY. Containing All the Words and Phrases Generally Used in Medicine and the Allied Sciences, with Their Proper Pronunciation, Derivation, and Definition. *By George M. Gould, A.M., M.D. Edited by R. J. E. Scott, M.A., B.C.L., M.D., Fellow of the New York Academy of Medicine. Based on Recent Medical Literature. With Many Tables. Philadelphia: P. Blakiston's Son & Co.,* 1012 *Walnut Street.* 1926. *Price* $10.00.

The new Gould is a real addition to the medical dictionary field and embodies all the advantages of previous editions of these standard works.

The present volume consists of 1,400 double-column pages on thin but opaque paper, spelling and defining 76,000 words, 5,000 of which are entirely new. The type is large, clear and easy to read, with all keywords in boldface; the binding is flexible blue fabrikoid. There is a thumb index.

Spellings and definitions are based upon standard textbooks and not copied from older dictionaries. Eponymic terms are included in alphabetical order and not merely in various tables of signs, operations, etc. Pronunciation is shown by phonetic arrangement of letters, avoiding confusing diacritical marks as much as possible.

The tables and charts, which are freely used, are clear and practicable. The book is not padded with pictures from various textbooks, but the illustrations used really illustrate something. All the matter in the book is under the alphabetical headings, so that one does not have to search appendixes for needed information.

A thoroughly up-to-date, practical and satisfactory medical dictionary.

LORAND: HEALTH THROUGH RATIONAL DIET

HEALTH AND LONGEVITY THROUGH RATIONAL DIET. Practical Hints in Regard to Food and the Usefulness or Harmful Effects of the Various Articles of Diet. *By Arnold Lorand, M.D., Carlsbad, Czecho-Slovakia. Second Edition. Philadelphia: F. A. Davis Company.* 1916. *Price* $3.50.

Being a Carlsbad bath physician, Dr. Lorand has had extensive experience in the dietetic treatment of many disorders and has had the opportunity to study the effects of faulty diets.

This book has been translated from the German. In the introduction to the English translation, Victor C. Vaughan says, "While I might take issue with the author on certain unimportant points, it is my conviction that the work has been admirably done, and is certainly free from the fads which render so many of the books written on this subject, for the laity, harmful. The highest scientific authorities have been consulted, and their researches made comprehensible to the non-professional."

The book is intended for public use, but it contains a great deal of information on diet which is of value to the physician.

It consists of eleven chapters, 417 pages of text. Some of the subjects discussed are as follows: (1) The influence of food upon man, his stature and the nervous system; (2) The injurious modes of feeding; (3) The good and evil effects of various food substances; (4) Vegetarianism and its advantages and disadvantages; (5) The increased muscular power resulting from a suitable diet; (6) The relation of food to old age and longevity.

F. J. H.

JAMES MACKENZIE INSTITUTE FOR CLINICAL RESEARCH

REPORTS OF THE ST. ANDREWS (JAMES MACKENZIE) INSTITUTE FOR CLINICAL RESEARCH, ST. ANDREWS, FIFE. *Vol. III. Edited by Prof. David Waterston, M.D., F.R.C.S.E. London and New York: Humphrey Milford, Oxford University Press.* 1926. *Price* $3.00.

The libraries are full of books on laboratory research, but the material on clinical research is far less abundant.

This is a volume of excellent practical papers on the following subjects: Sir James Mackenzie, M.D., F.R.S., L.L.D.; Ocular Disturbances Associated with Signs of Defective Elimination; The Capillary System in Its Relation to Clinical Symptoms; The Viscero-Sensory Reflexes, Illustrated by Cases of Intra-Thoracic Foreign Bodies; on the Nature of Urinary Protein, with Special Reference to Cases of Eclampsia; Organismal Activities and Chemical Processes; A Chemical and Haematological Study of Epidemic Parotitis; Papers Dealing with Records Obtained in a Boarding School for Girls; From the Children's Department; Cases of Exhaustion; On Certain Clinical Manifestations of Defective Blood Supply to Voluntary Muscles; The Radiography of Duodenal Ulcer.

The material is clearly and adequately presented, in a pleasing style, by men who give evidence of knowing what they are

talking about. Case reports and good illustrations are used freely. The book is well made in all respects and of convenient size.

A valuable work for study by all practicing internists.

DAKIN: GENERAL ZOOLOGY

THE ELEMENTS OF GENERAL ZOOLOGY. A Guide to the Study of Animal Biology, Correlating Function and Structure, With Notes on Practical Exercises. *By William J. Dakin, D.S., F.Z.S., Professor of Zoology in the University of Liverpool. London and New York: Humphrey Milford, Oxford University Press.* 1927. *Price* $4.00.

Dakin's "Elements of General Zoology" is the best example I have seen among the more general textbooks in zoology aiming to present the subject in its experimental and dynamic aspects. It is the author's avowed purpose to emphasize function and he has succeeded in this admirably, having presented a book altogether attractive in appearance, interesting in style, well illustrated with diagrammatic sketches that aid the presentation greatly, and comprehensive in its field. It is a book that commands the attention and is well worth while for its cultural value to the layman, as well as technically to the student.

In adverse criticism, it possibly might be said that there has been too great neglect of the structural and developmental phase of the subject to meet its greatest efficiency with the general reader, and I am sorry to see the historical phases of the subject almost entirely neglected.

C. E. T.

ADAMS: OCCULT PHYSICS

A PRIMER OF OCCULT PHYSICS. *By W. R. C. Coode Adams. London: The Theosophical Publishing House, Ltd.* 38 *Great Ormond St., London, W. C.* 1. (*Chicago:* 826 *Oakdale Ave.*) *Price* $1.25.

A true scientist is one who grasps the working out of causes, not one who has an encyclopedic knowledge of the properties of substances. All admit the validity of the law of cause and effect, but few are willing to follow it so far as to investigate the causes underlying those effects which we call the material world.

Much interesting and valuable information regarding these basic causes has come to light during the last few years, not only through occult researches, but in the works of such men as Einstein, Ouspensky, Bragdon and Dunne. Our tight little atoms of a generation ago have given place to miniature solar systems of protons and electrons. Advanced thinkers are now becoming certain that time is not a thing apart, but is a function of space—a fourth dimension.

It is time that elementary physics was rewritten, along the lines of modern knowledge, and this the author has set out to do. Instead of beginning with matter and attempting to work back to the causes which underlie it, he postulates a Great First Cause and makes some suggestions as to why and how It manifests as a universe. He also outlines the Platonic idea of *projection.*

On the basis of fourth-dimentional time and occult researches, the author then proceeds to the discussion of time, space, matter, energy and evolution.

The subjects treated are profound in the extreme and many of the concepts involved are highly abstract, which means that the book is in no sense light reading. Yet, Dr. Adams has handled these large matters as simply as seems to be possible, and the result is not beyond the comprehension of anyone who has a fair knowledge of elementary physics and the inclination to do some hard and concentrated thinking.

Every one of us ought constantly to be working on some book which is just a little (but not too much) beyond our easy comprehension, for it is by such exercise that our minds develop and grow strong. This little volume is a fine intellectual exerciser.

RHEUMATISM

The number of *The Prescriber* for November, 1926, was entirely devoted to *rheumatic diseases,* particularly their economic aspects.

Those interested in this subject will do well to procure a copy of this issue from their booksellers or direct from the publishers, 6 South Charlotte St., Edinburgh, Scotland. The price is 3 shillings and sixpence.

MORGAN: ELECTROTHERMIC METHODS IN NEOPLASTIC DISEASES

ELECTROTHERMIC METHODS (Desiccation and Coagulation) in the Treatment of Neoplastic Diseases. *By J. Douglas Morgan, B.A., M.D., Instructor in Radiology, University of Pennsylvania. Philadelphia: F. A. Davis Co.* 1926. *Price* $2.50.

This is a small book of 159 pages of text, a bibliography and index, with 36 illustrations, which endeavors to afford the reader a practical insight into the methods of applying the high frequency current to benign and malignant growths.

The author begins with a brief review of electricity, as applied to medicine, and follows this with the diathermic methods as used in surgery. The technic is well described and the author is to be complimented on having pointed out when preliminary operations should be done to render electrocoagulation safe and effective.

While monopolar desiccation, socalled, receives perhaps more attention in this book than it actually merits, since in the destruction of any but small benign growths it should be replaced by the more effective and more scientific method of elctrocoagulation, it is, of course, a subject every one

who cares to make use of this "newer surgery" should be familiar with.

The book will prove a helpful guide in selecting the apparatus one needs for such work, and that, too, is a commendable feature.

It is also noted that the author seems to prefer to make use of an interrupted handle electrode for desiccation and coagulation. Whether this instrument is as good or better than the solid electrodes with the current being turned on and off as needed during an operation by a foot switch, is a matter of personal experience, but it seems to us that the foot switch is by far the superior method.

In view of the newness of diathermy in surgery, a book written by a man who evidently has had a rich experience with this agency, must be welcomed as a valuable addition to the literature, which, unfortunately is at present filled by contributions which leave much to be desired. We recommend this little book highly.

G. M. B.

GRIFFITH AND MITCHELL: PEDIATRICS

THE DISEASES OF INFANTS AND CHILDREN. *By J. P. Crozer Griffith, M.D., Ph.D., Professor of Pediatrics in the Graduate School of Medicine of the University of Pennsylvania, and A. Graeme Mitchell, M.D., Professor of Pediatrics, College of Medicine, University of Cincinnati. Second Edition, Reset. Two Octavo Volumes, With 461 Illustrations, Including 20 Plates in Colors. Philadelphia and London: W. B. Saunders Company.* 1927. *Price* $20.00.

No excuse is needed for the publication of a book on diseases of children, for all physicians are called upon to treat these little patients more or less.

In preparing these volumes the authors have included such subjects in surgery and the specialties as should be familiar to all who handle children.

The material is, so far as possible, based upon the experience of the authors, but as no one man can see all type of cases, free reference has been made to the work of others and due credit given them, with footnotes showing the original sources of the suggestions or quotations. Cross references are numerous.

Temperature charts, tables and other illustrations are used where needed to clarify the text, and these are accompanied by brief synopsis of the cases shown. All through the book, measurements of all kinds are shown in both the metric and English systems.

This second edition contains a number of new illustrations and tables and a sincere effort has been made (with apparent success) to bring the material up to date. Physical therapy has been adequately considered. The whole work has been reset.

The paper and binding of the volumes are good. The type is closely set, so that a maximum amount of information is included in a minimum of space. This style of typography make somewhat hard reading, but subheads help out. Both volumes contain ample indexes.

All pediatricians will welcome this work, as it stands between the ordinary textbook and the voluminous "systems." General practitioners will find in it a wealth of practical useable material, so expressed as to leave no doubt of the meaning and to make it available at once. It should prove a valuable addition to any medical library, large or small.

BROWNE: WORLD'S RELIGIONS

THIS BELIEVING WORLD. A Simple Account of the Great Religions of Mankind. *By Lewis Browne. With More Than Seventy Illustrations and Animated Maps Drawn by the Author. New York: The Macmillan Company.* 1926. *Price* $3.50.

It would appear decidedly difficult and rather ridiculous to produce Shakespeare's "Hamlet" with the Prince of Denmark left out. The idea of writing a book on religion with God left out of it seems almost equally improbable, but that is what Lewis Browne has attempted to do.

When a man proposes to make a solid and enduring contribution to the world's knowledge, whether it be a report of personal investigations, for the benefit of scientists, or a popular presentation of previously-known facts, for the general information of the public, the validity and worth of his offering depends upon his approaching his subject with an entirely open mind and setting forth all aspects of the question. If he comes to his task with his judgments already formed, or even with a mental bias, his work is almost certain to be ephemeral propaganda rather than sound reasoning or accurate reporting.

The author of this volume appears to be a prejudiced propagandist rather than a man with a sincere desire to determine and report the truth. He seems to have entered upon this task with the preconceived ideas that there is no being in the universe above or beyond human kind and that men have never received any promptings from a higher source. In his opinion all the world's religions have developed because of man's desire to escape from certain conditions or ideas of which he was afraid.

The book is cleverly written in delightful English. The prologue is a beautiful bit of poetry in prose form. The binding paper, typography and the original sketches are excellent. If one reads it as an entertaining piece of fiction founded upon fact, he will have several pleasant hours. If, on the other hand, one is seriously interested in learning how religions have developed, what they have meant to their adherents and what their teachings have added to the sum of human progress, he must look elsewhere because all statements of alleged fact are vitiated by the author's prejudiced point of view.

In the hands of a person whose reasoning powers are developed to the point where the obviously falacious reasoning becomes apparent, this book will prove entertaining and mildly informative. Adolescents who are likely to mistake clever phrases and specious arguments for proved and accented truth are liable to have their spiritual development decidedly hampered by a reading of this volume—and one gets the impression that it is persons of this latter class who are contributing largely to its popularity.

PRICE: DISEASES OF THE HEART

DISEASES OF THE HEART. Their Diagnosis, Prognosis, and Treatment by Modern Methods. *By Frederick W. Price, M.D., F.R.S. (Edin.), Physician to The National Hospital for Diseases of the Heart. Second Edition. London and New York: Humphrey Milford, Oxford University Press.* 1927. *Price* $6.20.

The first Edition of this work appeared in 1919. Its object was to present the subject of heart disease from the point of view of the clinician, omitting all matters of merely theoretical interest.

In this second Edition, the same idea has been kept in mind by the author in adding new material which has accrued since the first publication. This new matter embraces such subjects as Quinidine Therapy; Bundle Branch Block; Auricular Fibrillation and Flutter in Thyrotoxic Conditions; Surgical Treatment of the Aorta, etc.; Anesthesia in relation to Cardiovascular Affections X-Ray Examinations, etc.

In his book Dr. Price gives special attention to cardiography and the book contains the more important results of modern cardiographic methods, especially those of practical value. But the older clinical methods of value are properly recognized, as the book is intended primarily for the general practitioner and clinician.

W. A. B.

PRINZ: DENTAL THERAPEUTICS

DENTAL MATERIA MEDICA AND THERAPEUTICS. A Textbook for Students and Practitioners. *By Hermann Prinz, A.M., D.D.S., M.D., Sc.D., Sixth Edition. St. Louis: The C. V. Mosby Company.* 1926. *Price* $6.00.

An excellent discussion of the various drugs which will be used by dental surgeons, with directions for preparing and giving them.

The present (6th) edition has been revised to conform to the U.S.P.X.: much new material has been added and old and obsolete stuff thrown away; chapters on physical therapy in dentistry and on the technic of local and regional anesthesia are sound and satisfactory.

This or some similar book should be in the library of every dentist.

SUTTON: TIGER TRAILS

TIGER TRAILS IN SOUTHERN ASIA. *By Rihard L. Sutton, M.D., Sc.D., LL.D., F.R.S. (Edin) Illustrated. St. Louis: The C. V. Mosby Co.* 1926. *Price* $2.25.

A book by a doctor, for the enjoyment of doctors—and other people.

A story of exploits and experiences in that little-known but fascinating country, French Indo-China. The narrative is simple, colloquial and vivid, and the directions for big game hunting fairly explicit. The illustrations are numerous, original and interesting.

Those who enjoy a story of virile adventure in wild places will find the reading of this volume a highly pleasing way to spend a few hours of leisure.

CONYBEARE: CARE OF THE DIABETIC

SELF-CARE FOR THE DIABETIC. For the Use of Diabetic Patients. *By J. J. Conybeare, M.C., M.D. Oxon., F.R.C.P. (Lond.), Assistant Physician to Guy's Hospital. London and New York: Humphrey Milford, Oxford University Press.* 1916. *Price* $1.15.

This book has been written for the diabetic patient to educate him regarding dietetics, the nature of the disease, the diabetic diet, urine testing, the use of insulin, hygiene, and diabetic cookery, so that the patient may be better enabled to follow the instructions of the physician.

F. J. H.

KAPPIS: OPERATING ROOMS

ORGANISATION UND ORDNUNGSEMÄSSER BETRIEB DES OPERATIONSSAALS. *Von Professor Dr. Max Kappis (Hanover). Mit 28 Abbildungen. Georg. Thieme, Verlag, Leipzig.* 1927.

A brief and practical manual on the organization, arrangement, furnishing and management of operating rooms and surgical clinics. (In German).

Medical News

MISS SWANSON LEAVES US

The readers of CLINICAL MEDICINE AND SURGERY will never know how much of their enjoyment and profit from reading a well-arranged and cleanly printed magazine they owe to Miss Mabel Swanson, who is leaving us this month to be married. Her name is, however, familiar to all our contributors, for she has proof-read and arranged all their reprints and conducted all business correspondence with them.

Miss Swanson has been connected with this journal for fifteen years, having been secretary and practically assistant to the former Editor, Dr. Achard, and to the present editor. Her going will be keenly felt in the editorial office, not only because her exceptionally competent assistance will be missed but also because her sunny presence has been an inspiration on dark days.

We hope all our readers will join with us in wishing her every felicity in the new phase of her life which now begins.

ANGELO PATRI RECEIVES MEDAL

The first annual award of a medal for the best book for parents by an American author, given by *Children, A Magazine for Parents*, has this year gone to Angelo Patri, principal of Public School No. 45, New York City, for his book, "The Problems of Childhood".

Mr. Patri is the author of several other books and a frequent contributor to the periodical literature on pedagogics.

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NEW HEAD OF WOMEN DOCTORS

The National Women's Medical Association held its annual meeting in Washington, at the same time as the meeting

of the American Medical Association. Dr. Louise T. Jones, of Washington, D. C., was elected president of the Association for the coming year.

CIVIL SERVICE

A *specialist in pathology* is needed at Veterans' Bureau Hospital, Knoxville, Ia. Entrance salary, $3,800 a year, with chance of promotion to senior medical officer at $6,000 a year.

Applications are now being received and competitors will be rated upon their education and training (30%) and their experience (70%).

Applications for appointment as *physiotherapy aide* must be on file at Washington, D. C., not later than July 30 and November 12, 1927.

The examination is to fill vacancies in the Field Service of the Veterans' Bureau and the Public Health Service, and in positions requiring similar qualifications.

Competitors will be rated on a mental test, practical questions, and their education, training, and experience.

Full information may be obtained from the United States Civil Service Commission, Washington, D. C.

MEDICAL SOCIETY OF THE MISSOURI VALLEY

The Medical Society of the Missouri Valley will hold its annual meeting at Des Moines, Ia., September 14 to 16, 1927. For particulars address Dr. Chas. Wood Fassett, Sec'y., 115 E. 31st St., Kansas City, Mo.

DEATH OF DR. STUCKY

Sr. William S. Stucky, of Lexington, Ky., passed away on June 10, 1927. He was the son of Dr. J. A. Stucky, with whom he had been associated in practice for a number of years.

POSTGRADUATE INSTRUCTION IN INDIANA

The School of Medicine, Indiana University, at Indianapolis, is offering several interesting and valuable summer courses for medical graduates.

The period of instruction is from June 10 to July 22, and the courses offered are: Current Problems in Biochemistry; Pharmacology; Physical Diagnosis; Medical Ward Visits; Physical Therapy; Modern Drug and Bio-Therapy; General Pathology; Disease Production and Resistance; and a short course of lectures on Nutrition. Clinics will be held in dermatology, urology, gynecology, ophthalmology, rhinology, otology and laryngology and in surgery. The fees are moderate.

For information, address The Registrar, Indiana University School of Medicine, Indianapolis, Ind., and act promptly, for the classes are limited.

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SURGEON-GENERAL RIXEY CELEBRATES GOLDEN WEDDING

Those who can remember the administrations of McKinley and Roosevelt will recollect that the name of Dr. P. M. Rixey, then Surgeon-General of the Navy, was much in the public eye, because he was the personal physician of those two presidents.

The cares and responsibilities of active public life are over for Dr. Rixey and he is enjoying the well-earned leisure of his retirement.

Recently he and Mrs. Rixey celebrated the fiftieth anniversary of their wedding. Advancing years have no terrors for those who have lived full and valuable lives, for age is mellowed by wisdom and sweetened by memories.

COURSE IN SOCIAL HYGIENE

The American Social Hygiene Association will give a course of instruction in social hygiene at Columbia University, New York City, July 11 to 22, as one of the summer courses in preventive medicine and public health of the College of Physicians and Surgeons. The course will be open to physicians, nurses, sanitarians, teachers and other health workers and will cover the subject rather fully, from a clinical as well as a didactic standpoint.

Full information may be obtained by addressing the Association at 372 Broadway, Albany, N. Y.

DR. KRUSEN TO HEAD COLLEGE

Wilmer Krusen, M.D., LL.D., F.A.C.S., has recently been elected president of the Philadelphia College of Pharmacy and Science.

Dr. Krusen was a graduate in pharmacy before he took up the study of medicine, and since receiving his medical degree from Jefferson Medical College, in 1893, has been very active in a large number of medical and civic societies. At the time of his new appointment he was director of the Philadelphia Department of Public Health.

DR. W. T. THACKERAY PASSES AWAY

An original character and keen thinker, well known to readers of this journal for many years, was Dr. W. T. Thackeray, of Fowlerton, Texas. He was a true citizen of the world, having wandered widely and had many exciting experiences; withal he was a close observer and a wise and able physician.

Dr. Thackeray went to his long rest May 29, 1927, at the advanced age of 87 years. He will be missed by his community and by his many friends.

BUNGLING FOR INFORMATION (OR WHAT HAVE YOU?)

The ransacking of the plant of one of our advertisers (The Abbott Laboratories) b a gang of armed burglars, a few weeks ago, is a mystery which has excited much speculation all over the country. The thieves did no serious damage and appear to have carried off nothing of any value, so that the object of the raid is wholly a matter of speculation, at present.

BIRTH CONTROL BOOKLET

Dr. S. A. Knopf's booklet entitled "The Medical, Social, Economic, Moral and Religious Aspects of Birth Control," is for sale at the office of the American Birth Control League, Inc., 104 Fifth Avenue, New York.

Cloth bound copies 50c, paper bound copies 25c. All benefits derived from its sale go to the treasury of the League, for propaganda work and the maintenance of Birth Control Clinics.

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